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General Articles

THE SELECTION OF THE COMMERCIAL HORSE*

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In these days of mechanical competition in the world of transport, it is well that veterinary surgeons should review the position of our friend the horse. They should study his case from all angles, in order to ascertain in which ways they can help him and his owner to keep in business and thereby assist in the preservation of commercial equine veterinary practice, which is in dire danger of extinction. Economy is the modern catchword and in business life Economics rule as a dictator. One of the chief factors which affects the economy of horse transport is horse wastage. Wastage involves such conditions as type of work, accident and disease, horsemastership, etc., but the most potent factor is probably summarised under the heading of average duration of service. We all know that this duration of service varies immensely and that the factors are many, but I am confident that the principal reason for good service is to be found in the horse himself. There are good wearing horses and there are bad. Some horses last longer than others no matter what the work to which they are put. We all know of good and bad types or strains. Some buyers are more uniformly successful in their choice than others are. It is common knowledge that a rat-tailed horse is generally a good one and that even the uninitiated could almost buy him on that testimonial alone. Why is this so? There must be many other striking features which will give us help in estimating a horse's future. I have no doubt that all of you have your own particular signs of approval or disapproval. If, in the course of the discussion, you will make them known, the collective knowledge thereby disclosed must be of inestimable value. My endeavour is to make you air your views. I do not intend to bore you with details appertaining to the orthodox examination of horses as set out in text-books. If one followed such teaching too literally, the sale and purchase of horses would cease. It has never been my lot to render a certificate saying "This horse is sound." I am of the opinion that the animal to whom this description could be applied has never been seen in Britain, at any rate. I have on many occasions advised the purchase of animals showing some palpable condition classified as an unsoundness, and in the majority of cases my clients have not had cause to regret my advice. Many clients use their own judgment when buying animals. In most cases, their technical knowledge other than that of shape, make and colour and an approximate estimate of age is at a minimum. Some buy by size and colour alone. Watching horses bought under such circumstances, in the district of a busy London practice, I have many times been amazed at their stamina, length of service and freedom from disease, in spite of the presence of obvious defects which a veterinary surgeon working on orthodox lines could not possibily disregard. I am confident that technical defects are in themselves no criterion as to an animal's serviceability.

To be able to sum up a horse is a natural gift to many. He who possesses this gift is one of nature's favourites. This gift can be acquired by the majority; to a few it is denied, however much they search for it.

There is no beter way of acquiring such a useful asset than by making full use of our anatomical knowledge, of the writings of those who have gone before, or learning at the feet of those who are full of years of experience.

Veterinary surgeons are diffident, but I hope to provoke comment such as will lead to a good discussion here and possibly in the veterinary press.

I call to mind a veterinary surgeon, now dead, who for a period of fifty years or so ran a very large and lucrative London horse practice. Purely as a veterinary surgeon he was not of any great consequence: many would say that he was completely and hopelessly out of date. His examination of horses was apparently of a very cursory nature. He never removed his gloves. He bought to a type and all his firms had the same type. He took little notice of technical defects, yet his clients had every reason for confidence for they got service from their animals. Since his death I have been interested to watch the horses in his various firms change from a fixed type to an "odds and evens" one. I know that on the whole, in spite of shorter working hours, the average length of service has diminished.

I know a dealer who also buys to a type. Many

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of his purchases are simply trotted past him and yet there is no man in his line to whom I would go with greater confidence. The present time is opportune for a discussion of this question for you must all realise that the majority of our students and young graduates are not drawn from the same "horsey" strain as was previously the case. Their knowledge has all to be acquired during their academic career and consequently they are apt to follow the book too closely. I will quote an example of the effects of this system.

One M.R.C.V.S. has to my personal knowledge driven a considerable firm to adopt motor transport. According to his certificates of examination every animal they had on approval was a potential cripple. The last time they attempted a purchase fifteen were examined without a deal being completed. This gentleman acted in all good faith, but he paid no heed to the question of suitability. He rendered a certificate detailing all manner of so-called defects, and I must confess he found all that there were to be discovered. Imagine the effect of such a certificate when produced, as was the case in this instance, before a Board of Directors. It was the Secretary of the company who drew my attention to this position, for when I asked him one day why they had gone over to motors, his reply was "We cannot get horses." The members of the younger generation have been bred and born in a mechanical age and they are now entering into the management of their firms. In many cases their knowledge of horses is negligible and consequently more and more will our clients turn to our profession for advice and judgment.

When buying for clients, I try to keep away from repositories or sales. I leave that duty to the legitimate dealer. I prefer to examine at the vendor's, or better still at the buyer's, premises. I insist upon a clear week's trial for animals of any value. A week's trial is, in my opinion, more reliable than any examination. If a sale is not completed, it is a simple matter to compensate the dealer by some previously agreed payment for hire, etc.

Type.—Dealing with type, "a good sort" is generally a better proposition than a poor or bad sort.

My ideal to withstand wear and tear is as follows:—A gay, stocky, compact horse, low to the ground, with a small head, a strong thick neck, wide in the shoulder and chest, plenty of room between the elbows, deep in the rib, short coupled, big roomy quarters and a good bend in stifle and hock. I like them well planted on their feet, feet not too big (blue or dark horn, if possible) knees and hocks as close to the ground as possible, wide at the knee and close at the hock. I like a roan or a dark brown, but whatever the colour I want it to be deep.

Coupled with a six- or rising seven-tooth, this is my ideal, but one as you will realise seldom entirely obtained.

I spend some time looking over from all angles. I consider that this time is never wasted: many points apart from general conformation can be noticed and they are of the utmost importance. The general demeanour is important—a gay attentive animal is more likely to put his best into work than is the mute. A kind eye, a delicate nostril, and the position and carriage of the ears indicate temperament.

I prefer a long ear to a short one. The animal that carries his tail well is one I like. I am suspicious of one who is shifty on his feet: the gentle rock from heel to toe is indicative of incipient foot trouble. Odd-shaped feet should be noticed but I pay little attention to this if no other defect is to be observed in them. Big roomy knees and hocks are an advantage. I am sceptical of the wearing qualities of a very sloping pastern; it has been my experience that show-ring pasterns do not wear well and that straight ones are the best. The feet should be of a good shape, more like a bell than a plate, the wall showing a nice acute slope.

A good strong heel is probably the most important part of the hoof. Very narrow heels are bad, but on the other hand a wide heel is not necessarily a good one—a wide heel is often shallow and so indicative of weakness. The depth of the heel is all important: you all know that mules and donkeys have very deep heels; in these beasts foot trouble is rare and as a rule their years of service are long. I look for a good strong sole and plenty of it. If it is strong and thick I do not worry much if it is inclined to be flat; the flat or dropped soles which are troublesome are those which are congenitally there or follow disease or injury. Their greatest defect is in their thinness.

Horses with mealy-coloured legs; those bearing dry, coarse, long hair; those with soft or brittle chestnuts or ergots, and those in which the skin of the heel is inclined to form ridges or folds I avoid, if possible. I consider that all these things are indications of constitutional weakness and show a tendency to such troubles as dermatitis, grease, and canker.

A good frog is essential. To many a good frog means a large one, but I prefer a medium-sized hard frog which has a good shape and plenty of keratin. I have no time for the large fleshy frog; it does not stand up to wear and it functions freely as an equine pin cushion for foreign bodies.

Plenty of bone in the limbs is always a good sign. I do not care much whether it is flat or round as long as there is a good handful. Why is flat bone supposed to be more virtuous than round bone? Surely from a constructional or

mechanical point of view the advantage should lie with the round variety.

When making the general inspection it is wise to take stock of the action of the flank. I have found that many horses in the very early stages of respiratory disease or disability often show abnormality of movement at this preliminary quiet look over. On movement, or excitement, these signs often disappear or are masked. Defects of wind from whatever cause are likely to be progressive and so they are not conducive to good service. In respect of age, I reject all under five and take very few at five. I would rather have an eight-year-old than a four. Immature horses are harbingers of trouble. If they survive their passage into a stable infected with catarrh, strangles, etc.—and all stables are so infected—they let you down at a later date for their bones cannot stand the knocks and hazards of our streets. The latter remark also holds good for animals of foreign origin, ponies excepted. A horse which is over eight is unlikely to add more trouble to his quiver than he has already got, accidents excepted. As I have said before, six off or rising seven is the ideal age.

A young horse showing signs of filling in the joints, especially those of the fetlocks, is a dangerous purchase. He already shows unmistakable signs that he is unlikely to last long in hard work. If he cannot undertake farm or country work without acquiring this evidence in his limbs, how much less are his chances on hard roads and in heavy work.

A considerable amount can be learnt from a horse's action. In my experience a horse with wide fore legs and elbows, with slightly "pin-toes," wears longer than others. A straight goer is good, but he will often wear himself out by unnecessary action. I have no time for a cat-footed horse. It is rare that he has good feet, his action wastes energy and it puts excessive wear and tear on joints and tendons. He is likely to tire early, and so such injuries as brushing are frequent sequelæ.

Beware of the horse who twists his hocks when at the walk. This in itself is bad, but it also means that, after a short time at work, he will most probably perform the same action with his feet. In consequence of the latter action there is waste of energy and he will almost double the yearly shoeing bill. The latter point also applies to the slouching elephantine gait. It is not often realised that during his working life the average working horse costs his owners more in shoeing bills than what was his original price.

A balanced length of stride between fore and hind limbs is essential: the noise the horse makes at the walk or trot should be a level and regular 1, 2, 3, 4.

A horse with a normal gait always wears the outside toe of his fore shoes. The animal must be able to back and turn well and with ease: I would not under any circumstances advise the purchase of a horse I suspected of spinal defects. It is not my custom to touch the horse's legs until I have seen him go in his paces. The tactile appreciation of a lump will often bias one's opinion as to whether he goes level or not.

The condition of the teeth is an indication of the existence or want of general constitutional well-being. Strong, clean, well-placed teeth accompany good health.

Horses with large mouths, whiskers, drooping lower lips are generally good, steady workers. They do not wear themselves out.

A short neck is better than a long one. It is stronger and more suitable for manger feeding.

See that the tubercle of the scapula is not too prominent, for these projecting bones are the common site of unavoidable sore shoulders for which the poor carman is often blamed.

A good back and a rounded barrel minimise the incidence of harness injuries.

A well-filled perineum and a large sheath are good points.

I like to see a good stifle, *i.e.*, a joint with a good bend. A good bend means a strong thigh and leg. Cart horses of recent years have shown a tendency towards a straight stifle. A straight stifle is a weakened one and in my humble opinion this is a point which needs the attention of our breeders, exhibitors and judges.

I hope that, as far as we have gone, you will gather what types and points of conformation are, in my opinion, the best from the point of view of service. There are many others, I have no doubt.

I propose now to deal with some of the more technical defects, giving my views as to their importance.

Splints.—These are of no great consequence in the commercial horse. The only types we need fear are those in the metacarpal groove.

Sesamoiditis.—I always avoid horses showing any sign of this. The sesamoids are probably the most used fulcrum in nature.

Ring-bones.—Evidence of low ring-bone or pyramidal disease indicates a risk I am not prepared to take.

High Ring-bone and Ankle Bones.—If these are well formed and the horse is over six years old, with a well-balanced pastern and foot, they are unlikely to cause trouble. This statement can be borne out by an examination of any London stud. Some competent observers state that fully 80 per cent. of London horses show ring-bone without detrimental effects. I assume that they classify any bony lump between foot and fetlock as a ring-bone. A very old and observant veterinary friend with many years' experience amongst 'bus and commercial horses has told me that "If the foot was good, ring-bone never stopped him buying a horse."

Side-bones. In official examinations and contests, great stress is laid upon their presence. This is a correct attitude, for no one can contest the fact that a horse is better without them. In commercial life this attitude does not always meet the case. They are certainly not the cause of all the trouble attributed to them. There are a few who say that side bones are beneficial. Approximately half of the lateral cartilage is enclosed inside the hoof. The side-bone which one can feel is outside the hoof. The offender is the ossified cartilage which is inside the hoof. If this portion of cartilage is affected there is increase in the intra-hoof pressure which leads to pain, pressure and changes in the contour of the foot. My view is that the presence of even extensive side-bone need occasion little alarm if the animal is of a mature age, and if the hoof or foot is of a good shape and texture.

Spavin. Well-formed spavins are not guilty of all that is attributed to them. The dangerous spavin is the one we cannot see or palpate. A periarticular spavin in a cart horse need occasion as little alarm as those seen in the ox. Spavin is most likely to cause trouble in the fast worker and trotting horse. Concussion, not strain, is the most potent cause. It is interesting to note in passing that spavin was the most feared defect in the hard-worked stage coach horses; particularly was this so as the roads were improved and speed became all-important.

Curb. In the commercial horse this condition is unlikely to be troublesome and need not occasion alarm.

Windgalls, Thoroughpins, Bursal Affections. These are likely to be slowly progressive. They are, however, of little consequence in a horse over seven years.

Hoof Defects. These are always dangerous. Malformed hooves I always reject. True sand cracks should be avoided. Those originating at the lower border of the wall are likely to cause little inconvenience. Prominence in the pyramidal and toe region is dangerous. A good thick and strong wall and sole are essential.

Corns. I always reject a horse with corns. "Once corns, always corns."

Thrush. This is of little consequence in a good frog. Many horses are inclined to show this trouble for a short while after coming to town. Spontaneous resolution is a frequent occurrence.

Capped Hocks and Elbows. I do not like these; they indicate a difficulty in resting in circumscribed circumstances, and a horse which does not rest sufficiently cannot wear well. I will readily admit that in themselves they rarely cause loss of time. I do not look with favour upon a horse who does not lie down during his trial.

The Eye. Most of the technical defects, blindness excepted, are unlikely to interfere with the usefulness of a commercial animal. Shying is more dangerous than cataract.

Mallenders, Sallenders and Grease. I would not willingly purchase a horse suffering from any of these defects, no matter how good he otherwise appeared to be. These lesions are never completely cured, and the most sanguine expectation is that the animal so affected will spend many working days in the stable.

Shivering, Stringhalt, etc. Defects such as these are likely to be progressive and therefore should be avoided.

I prefer a slightly roach back to a swamped back.

A lean wither is a potential site for sores.

Skin Disease. The skin disease I fear most is that generally termed "boils." If inadvertently one of these animals gets into a stable, he becomes a constant source of worry to all concerned, and he will probably spend half his working life in the sick lines.

What is generally termed "acclimatisation" or "getting into or used to work" is of the utmost importance. It is unreasonable to ask a horse to come to town from the country and go immediately into hard work. For a time his life is one long excitement, for he is in surroundings which are absolutely foreign to his nature. His first few weeks make him an excited, slipping mass of perspiration, subject to any specific organism that may be lurking in street or stable. Horses should never, if possible, be brought to town at the beginning of the winter. In any batch brought in at this time you are bound to get casualties. They should be introduced to towns in or about April or May. They can then be seasoned on the lighter summer work, and, further, this procedure will release some of the older stagers so that they can go to grass. Regular intervals at grass add corresponding years to the horse's working life.

This brings me to the end of my paper. Many of the points raised must, I am sure, be familiar to you all; therefore, I am expecting a good discussion to follow. Before I close, however, I would like to mention what my procedure is in dealing with my clients, for, as you will all recognise, no one's judgment is infallible. I insist that all my clients keep a horse book in which they insert a description of the animal, a note is made of the defects found, and in the final column my remarks as to suitability are entered. I have often been able to get more advantageous terms for my clients, and the book is a protection in case my judgment proves to be at fault.

I have asked a number of renowned veterinary surgeons to forward their views on this important subject, and I have pleasure in reading to you their valuable remarks.

DISCUSSION AT WESTERN COUNTIES MEETING

A: Contributions by Invitation

Working Animals and Technical Defects

MAJOR-GENERAL SIR JOHN MOORE,
K.C.M.G., C.B., F.R.C.V.S.

In considering qualities which make for longevity of working animals, and hard wear and tear, it goes without saying that breeding from sound stock is the first essential. In this respect it is an indisputable fact that for hardness of constitution of the equine race, and the ability to stand up to work of an exacting nature, the dam exerts a greater influence than the sire. Robustness is an inherited factor, and generally more prominent in the female line than in the male. For this reason, therefore, the selection of mares for breeding purposes should always have careful thought and discrimination, the stout, well-built, roomy mare being the ideal for the production of equally sound, well-built stock for commercial or working horses. I remember, on my return from India in 1921, and on paying a visit to the Royal Show at Derby in that year, what a shock I received on seeing the three-year-old Clydesdale filly class. The weedy-looking specimens, showing a large amount of daylight under them, were no credit to selection of either sires or dams, and they certainly made a poor show in comparison to the stouter Shire, the compact Suffolk and the Percheron noted for prepotency. Yet Australia swears by the Clydesdale, not only as pure bred for work on the land and in cities, but for crossing with the thoroughbred for the production of light draught horses for transport purposes and Artillery requirements of India. I am reminded of the circumstance that on the conclusion of hostilities in France, the Army Council asked the Commander-in-Chief of the Forces (Earl Haig) for a special report for the Board of Agriculture (as it was then) on the merits or otherwise of the various breeds of animals employed by the British Expeditionary Force. The Director of Remounts and I were given the task of furnishing the report, and though the balance of opinion went to the Shire and crossed Shire, the Australian Divisions plumped for the Clydesdale and Clydesale cross. The reason for the latter is apparent, for Australia is a country, *par excellence*, of good grass and suitable climate where stout and robust animals are raised.

Regarding the degree to which certain technical defects militate against the usefulness of working animals, it may be taken for granted, in the first place, that no disability or lameness is hereditary, and that it is only a predisposition to such that is transmitted, which in plain language means a relationship to conformation. The terms "practically sound" and "workably sound" are useful designations to cover up physical defects, and if we had to discard every working horse that had some technical unsoundness, we should have a minimum number of horses to carry out our industrial undertakings. There are many Clydesdale horses with sidebones that perform their daily work. The Army horse with a spavin can carry on satisfactorily until finally cast: the same with the horse of commerce. I have never known an Army horse back at the knees that ever suffered from sprained tendons. Curbs are of little consequence, and horses with rign-bones, especially those animals that perform work at a walking pace, come within the category of "workably sound." The dividing line has to be made somewhere, and it is up to the veterinary practitioner to be the "Guide, Philosopher and Friend."

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The Commercial Horse

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Head and Neck.—The head should be fairly long (rather long than short), with good long ears. Short ears often indicate a cunning, lazy disposition and that the animal is not a generous worker. What are known as prick or lop ears are no detriment and are often found on extremely good, generous-natured horses.

A good bold eye, not what is known as a sock eye. Some horses have a sunken eye when three or four years old, but this disappears with age, and when the head fines down. Avoid a short pony head with thick jaws and a short angle in the mouth. What is known among horsemen as a short mouth means a horse with a very small mouth and which wears the bit very low in the mouth. A horse of this description always wears the tongue over the bit, a most serious fault in a working animal, and practically a fatal fault in a riding horse.

The neck should be well developed and very muscular, not too cresty or long. A short, chesty neck is a sure sign of muscular strength and power, and in a heavy draught animal means more weight in the collar. The shoulders, being well muscled, are not so likely to get galled as in a thin-necked animal. Avoid a "ewe" (thin) neck; this fault is still worse if the neck is long and swan-shaped, that is, when the horse has its head up, the neck protrudes forward before the head, like a swan's. Ewe-necked horses, being deficient of muscle on their shoulders, are very liable to collar galls, besides being jibbers, and not staunch pullers, this last fault being due to weakness. A ewe-necked horse is nearly always a shelly animal, a bad doer, delicate, and irritable in disposition. A short ewe neck, if very deep at the shoulders, and if the animal takes a deep collar, may be forgiven, but a ewe neck, however slight, is always a serious fault, and a sign of muscular weakness.

Shoulders.—An upright, heavy shoulder is the best for heavy draught as the animal is drawing into the ground and gets a better grip with his feet. An animal with upright shoulders when put to a dead weight will end his pull by falling on his knees. An upright shoulder is conducive to quick stepping, active walking and trotting action. Nearly all American trotters have upright shoulders. Sloping shoulders, as seen in the racehorse and riding horse, are adapted for pace in the walk and gallop. Animals of this conformation are generally slow in the trot, but have the great advantage of putting their fore feet right in front of them in all their paces, which gives great comfort to the rider, and a horse with this action is not so likely to fall. Sloping shoulders for heavy draught are not an advantage. A horse of this conformation is pulling out of the ground, and ends up a dead pull with a rear and fore foot off the ground. Also, being deficient in muscle, he is more likely to galls. An upright-shouldered horse when pulling will show the collar at the mane further forward than at the lowest point of the neck. The sloping shoulder is the reverse, the lowest part of the collar being further forward than the top. The Percheron, the premier breed of draught horse in the world, have practically all upright shoulders, so also have the Suffolk. Both types of shoulder are found in the Clydesdale and Shire.

Back and Quarters.—The back should be level, as nearly straight as possible, wide over the top, especially at the lumbar region. A dipped or hollow back is not a disadvantage—a great many really good animals have had hollow backs. It is closely associated with very wide, good quarters, a good constitution, temper and disposition. "Cloister," the greatest steeplechaser the world has ever seen, and who won the Grand National in 1893, had a very hollow back. His sire "Ascetic," the sire of three Grand National winners (a record) and the best sire of hunters ever known, had a hollow back, and left nearly all his stock with hollow backs.

Roach back is a most serious fault. It is always associated with short ribs; narrowness over the lumbar region; narrow, thin, split-up quarters and thighs. The animal's muscular development is weak, he has an irritable disposition, and is a bad doer. I would never advise a roach-backed horse for any class of work. Another fault is that a roach back is very liable to harness galls.

Limbs and Feet are most important for a working horse. The limbs and feet should be clean, and hard to the touch, with no hair if possible. The animal should stand level on his limbs, with no sign of shot or knuckled joints. Standing forward at the knee is a most fatal fault for any animal used at road work. The pastern should not be too long, short pasterns being less detrimental than long ones. The latter always mean weak muscular development. A great deal is said about knify, flat limbs with the tendons standing away from the bone; this class of limb looks well in the show-ring, but is not adapted for hard work: it shows work readily, is liable to wind galls and bursal enlargements. The best-wearing limb is the round one like the mule's or the donkey's, with the tendons tight up against the bone. The average working life of a mule is ten years longer than that of a horse, due to the legs and feet wearing better. The feet of a working horse cannot be too narrow and deep if natural—the same shape as the mule's feet. The widespread, open, thin foot like an inverted saucer is fatal in a working horse on the road or street. A horse with a thin, open foot should not be recommended for any work. A wide foot shows want of vitality and lack of hardiness of constitution, besides being "against nature." The natural and original foot of the horse was deep and narrow, with a round-boned limb. The wide open foot is the result of special selection in breeding animals for show, and not for utility.

Faults in Conformation to Overlook.—Back at the knee, or calf-knee, is of no moment, and found in all draught breeds when young. It always disappears with age—no old horse ever has calf knees. It is considered a great fault in a hunter, due to fashion. All horses when put to and kept at work go forward in all their joints below the elbow and stifle. This is a natural consequence of the hardening and tightening of the muscles.

Side-bones, Bog Spavins, and Thoroughpins are of little moment; they never cause lameness, neither do any bursal enlargements, and often disappear with age.

Splints are sometimes troublesome, especially near the knee (knee spavins). A horse lame from splints will always get sound; there is no such thing as chronic splint lameness.

Curbs are unsightly, but seldom cause lameness; if they do, it is temporary and disappears with age. No old horse ever has a curb.

Coarse hocks, or Spavins are of no moment. Spavin lameness is very rare. No notice need is taken of them if the animal runs sound, and flexes its hocks.

Ring-bones are rather a serious fault, more so on the hind limbs. They only cause lameness when they interfere with the growth of the hoof, and the foot or feet become altered in shape, generally contracted or smaller.

Ankle bones, and single exostosis or knots on the pasterns are of no moment, and never cause lameness.

Stringhalt, if slight, is no detriment—this fault always becomes worse with hard work and age.

Shivering.—A slight shiverer often lasts for years at farm work, but is not to be recommended for any hard road work. As a rule the complaint becomes worse with hard work, and age.

Jinked, or loose back (Sprained back).—A horse with this fault should not be recommended for any work, however light. It is no detriment to a mare for breeding, as the fault is always acquired. Big animals with this defect rarely lie down; when they do they have difficulty and often cannot get up.

Sight, Wind, and Hearing.—The eyes are of little moment in a working commercial horse. Any defect which interferes with the sight is much more serious in the near than in the off eye. A one-eyed horse is generally quite serviceable. "A good hunter" means sound in wind and eyes. "Glenside," the horse which won The Grand National in 1911, had only one eye.

Wind.—Horses for commercial work are rarely incapacitated by defective wind. Fat horses, roarers, and whistlers put to regular continuous work often become sound in their wind. Defective wind generally improves with good feeding, and regular work.

Hearing.—Deafness is rarely discovered. It is a bad fault in a riding horse, or a hunter. It is of no moment in a commercial animal used to town, or road work. It is a very bad fault in a farm or timber hauling horse where the work is done by command.

General appearance, quality, action, age, and colour.—Select an animal with an alert appearance, with the head carried fairly well up, elastic and quick in its movements, with as deep a chest as possible, with fair width. The chest cannot be too deep, but may be too wide. A deep chest means short fore legs. The body rather long than short, very deep back, ribs wide over the back, very wide quarters, and well-developed second thighs. Avoid a short horse, or one with a light middle, especially a gelding with a small or invisible sheath. A mare is more likely to develop middle than a gelding. Light-middled animals of either sex are never to be recommended; they are always bad feeders, often have chronic diarrhœa, are irritable workers, and mad animals in work. This applies to all classes of horses.

Quality in a horse cannot be defined. It means an animal with a fine skin, very little hair, a thin mane, and a thin tapering tail. It is always produced by some far back cross of the Thoroughbred or Arab. An animal with quality has an alert superior appearance, goes light, and is quick in its movements, shows vitality and life, being altogether different from the gross, coarse, heavy, slow animal with thick mane and tail. This quality is shown very much in the Percheron, as the breed traces back almost entirely to one Arab stallion, a grey named "Gallipoli."

Action.—A quick, true mover is to be desired, with a good bend in the knee. A rigid, wooden animal which goes with its head out, does not flex his neck or limbs, and moves with his legs like props is never to be recommended. A horse which goes wide and dishes, or throws his feet out (not in) is often a really good animal and can be safely recommended. All young horses become closer in their action with work, and condition. A horse which throws its feet in is never to be recommended; this fault becomes worse with work, the animal cutting and brushing to such an extent that it cannot be worked.

Age.—For working commercial horses the best ago to buy is about five years old. Older animals do not transplant so well. A great many horses bred and reared in the Midlands have never been stabled or tied when housed. They are turned loose together in straw yards. A horse having been treated in this way takes badly to a town or working stable, and often will not lie down (sometimes never). A seven- or eight-year-old horse often goes wrong when stabled. The custom of straw yards for horses is general in Norfolk, Suffolk, and Cambridge. The Suffolk breed are particularly susceptible to a change of life from the straw yard, and rarely last any length of time if stabled and tied up.

Colour.—It is an old saying, and a true one, that a good horse is never a bad colour. As a rule the best wearing animals have darker limbs than the body, and altogether the darkest colours are to be preferred. The two colours of which to be most careful are mealy chestnuts and bays. The former have almost white limbs; mealy bays have very light coloured bay limbs. Both these colours have a peculiar-coloured hoof: the exact colour cannot be described—it is neither black nor white; more or less of a muddy colour. These feet are always brittle, with soft crumbly horn. I would certainly not advise the buying of animals of either of these colours for town or road work. White limbs are as good as black; it is so with the hoofs; it is a great mistake to consider white feet or legs soft.

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J. W. McINTOSH, M.R.C.V.S., F.R.S.E.
London

The primary value of any horse, no matter for what purpose, is essentially based upon its power of locomotion, strength and endurance. Any radically weak point neutralises any number of good points: "The strength of a chain is limited by its weakest link." On the other hand, excess of power or development in one part may not only be useless but actually a source of weakness. Take, for example, a well-developed carcase on the top of weak limbs. This may, by its disproportionate weight and balance, cause the understructures to fail sooner than they would otherwise do. A strong, powerful fore hand is not an advantage if the hind quarters are light, because the stress on the propelling agents will be unduly great. Similarly, if the fore legs are weak they may suffer excessive propulsion communicated to them by powerful hind quarters. The first essential to keep before you in making a selec-

tion is the purpose for which the animal is required. Some minds will favour a particular breed, others are not particular in that respect so long as the animal conforms to a predetermined standard of suitability. Again, class of work must be considered. All, however, must agree that whatsoever the purpose there must be harmony of proportion and a true balance of muscular control and power if we are to expect the best results.

Conformation, then, stands out prominently. The animal must be well proportioned and balanced, have freedom and elasticity of motion, well-sprung ribs, good loins, thighs and gaskins, well-developed flat bones and joints, short shanks and cannons, with good, deep, solid, open feet and, as the dancing master would say, must carry itself with deportment. Given these qualities, small technical defects may be disregarded.

It must not be assumed, however, that I do not appreciate at its full value freedom from all defects—the ideal standard—but, as this is difficult to obtain, let us consider the economic standard to be aimed at. There are many superficial blemishes and even structural defects which, although better absent, do not detract from the animal's working value. I attach no importance at all to a splint for horses required for heavy, slow work, provided it is well away from the joints, nor do I attach any great importance to side bones, provided the animal has a good deep hoof and a wide heel and is required for similar purposes. Ring-bone, however, no matter what its position, I would never overlook as it is calculated to bring you trouble at any moment. Prominent ankle bones are, however, frequently mistaken for ring-bone. As you know, it is possible and indeed not uncommon to find this condition a normal development and even asymmetrical. A nervous temperament I detest in any animal, but this peculiarity must not be confounded with courage or mettle.

There are many other points I would like to elaborate; one could go on indefinitely, but perhaps these few observations may be of some interest.

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A. W. NOEL PILLERS, F.R.C.V.S., D.V.S.M., F.R.S.E.
Chief Veterinary Officer, Liverpool

I am asked to state, in as few words as possible, what I consider are the points in the selection of a commercial horse for purchase, which indicate resistance to wear and tear; and what is the significance of the various technical defects such as ring-bone, etc. The request should have been refused, as it cannot be done in a few words, but would fill a book. However, in order to repay, even in a small measure, some of my indebtedness to Professor McCunn, I make the following disjointed and incomplete remarks.

The requirements for commerce, so far as horses are concerned, are long life with a minimum loss of working time, at a reasonable cost. With the fixing of a price, the question almost becomes one of what defects can be admitted for the money. Having selected the horse and advised purchase, the veterinary surgeon often does not see the animal again until illness comes, but there are numerous defects which the commercial stud manager sees, *viz.*, bad temper, bad workers, bad backers, etc. The records of a stud book or those of the R.A.V.C. give results which are free from personal opinion, bias, or prejudice. I suppose eight years on the stones is a good life. This I believe is about twice as long as the best commercial motor lasts. For longevity in towns, we have to assume that housing, feeding and management have been satisfactory. I have just looked over ten horses whose service ranges from 12 to 16 years each. They are all kind and contented in disposition. They possess good round barrels with rounded hind quarters and the tails set high. Most of them have deep girths and the chests are wide through the heart. The legs are short and set on the corners of the trunk. The joints are sloping, with good bone, silky hair and normal feet of good horn. The heads are intelligent looking, with kind eyes, and are set on short necks. The junction of the neck and shoulder forms a natural bed for the collar and the back is only a little longer than the saddle. Viewed from the side, the action of such an animal should include good flexion of the knees and hocks, so that the ground is well cleared. From the front and rear, the limbs must work in vertical planes without any tendency to cross or approach the limbs of the other side. The weight of a cart-horse, (*i.e.*, weight for inches), furnishes valuable information, and between five and six years is a suitable age, growth then having ceased. There are a large number of other points which I have not mentioned, such as colour, feather and sex.

We come now to the time-honoured list of defects. *Ring-bone* is serious and should cause an animal to be rejected. It must, however, be distinguished from asymmetry and traumatic bone formation. It should be remembered that Mitchell has shown that ring-bone is a local manifestation of a generalised condition. *Spavin* in heavy horses is comparatively rare, but when present soon gives rise to lameness. All other things being equal, *side-bones* do not seem to give rise to much loss of working time or to early disposals and, subject to a reduction in price for their presence, should not prevent the purchase of an otherwise desirable animal. *Shivering* is always a serious defect and is unforgiveable. *Stringhalt*, even though it is of multiple etiology, is nearly always progressive, and its presence should prevent purchase. *Whistling* and *roaring* are serious defects, but whistling so often follows strangles that a stud of any size will have numerous whistlers doing useful work for a full term of years. *Broken wind* should likewise be a bar

to purchase, but it does not always have pulmonary emphysema as its underlying pathological condition. It may be the outward manifestation of other internal defects such as heart disease, pleural adhesions, etc. It is rare that the special senses give trouble in the commercial animal, but the *eyes* and *ears* should be sound.

Owing to the effects on the heart of toxins of previous infective diseases, the *pulse* should be taken and the *heart* auscultated before and after a burst of rapid movement. This will exclude the purchase of "stoppers" or quiet jibbers (heart cases). Owing to the effects of diseases of the *teeth* upon general health, bony enlargements over the roots of the upper molars or in the rami of the lower jaw should receive attention, as they may indicate *periodontal disease*. In such cases, purchase should be subject to a further examination of the mouth under suitable conditions. Spaces between the molars will lead to disease in a year or so on a diet of chop.

A large number of premature destructions are due to surgical conditions of the limbs. The chief of these are (i) thickened tendons, (ii) arthrites, and (iii) exostoses. The "thickened tendon" syndrome has many causes. Some of these occur in early life and are unassociated with "traumatism" or "contraction." Particular care should therefore be paid to see that these structures are "clean." The same care and attention should be given to all joints and bones. *"Fleshy legs"* or *filled fetlocks* may result from the toxins of heavy worm infestations, from lymphangitis, or even from repeated attacks of or long-standing *symbiotic mange*. If veterinary surgeons in general had to look after their purchases for several years, they would not so lightly pass over "a few *red worms* in the fæces" as they often appear to do at present. *Folds of skin* below the ergot have caused me a great deal of trouble; they seem to collect infection in the cracks which gives rise to grease, abscesses, and later granulomata, which recur and in the end become inoperable.

Having selected your horse, the final purchase should be contingent upon his lying down in his new home, being a good worker at his new job, with normal teeth after close inspection and sound feet when the shoes have been removed. These remarks apply to the heavy horse.

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C. CUNNINGHAM, M.R.C.V.S.
Veterinary Depts., Carter Paterson, Hays' Wharf and Pickfords, Ltd.

The most important point to be kept in mind in purchasing commercial horses is to buy animals suitable in size, weight and character consistent with the work required of them.

Quality and good conformation are essential, especially the former. Coarseness of breeding, as evidenced by excessive feather and thickened skin in the region of the heels, is to be avoided at all times.

Action must be elastic and show energy, straight without excessive high uplift; the head and neck so placed in the shoulders that they are naturally carried high.

The main points of make up necessary for long service in town work are:—Good feet with open heels; hard, flat leg bones; strong clean-cut tendons attached to well-developed muscles; good depth of chest; short level back; well-developed quarters with tail well set up, good abdominal capacity naturally following. "The heavier the draught at a walk, the shorter the legs," is a good slogan for wear.

Regarding colour, the dark shades are preferable, particularly in combination with darker or black points (apart from denoting harder constitution, a vast amount of labour is saved and also the evils resulting from indiscriminate leg washing rendered necessary by white points).

Age at time of purchase depends on class of work to be performed; if gradual seasoning can be given, four-year-olds give good lasting results. However, if required for direct hard work, six years must be the minimum.

All purchases must be sound, or as nearly so as can be secured to-day, taking into consideration the reduced number of young horses coming into the market. Stimulation of horse breeding is very necessary at the present time.

Regarding ring-bone and side-bones and their influence on service, these, if the preceding ideas have been carried out, do not occur to any great extent, especially if the animal has been effectually seasoned by light work for nine to twelve months; but when they do arise, casting and cutting the loss early is the most economical policy, more particularly if trotting work only is performed. Walking work, if combined, may absorb a certain percentage of ineffectives—conditional on the ring-bones not affecting the joints, or the side-bones not co-jointly existing with excessively contracted heels—and so aid the average service.

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L. G. GRYSPEERDT
Croydon

It is of course quite impossible in the course of a letter to deal with your "subject" except in a very scanty way. A point which I feel might, with advantage, be stressed in connection with the examination is that one should endeavour to acquire the knowledge as to what defects will not or rather are not likely to affect the animals utility from a working point of view. Quite a number of practitioners appear to be looking for something that will involve the rejection of the horse, rather than to be looking for a horse, possibly with minor defects, that is likely to prove of value for the work it has to do. Another point which is frequently overlooked is the suitability of the animal from the point of view of size, not necessarily height. We see quite a num-

ber of horses selected which are quite unsuitable. Some are too small and consequently the work is underhorsed; on the other hand, we find horses selected that are altogether too big and heavy for fast work and light loads.

Our first question here to new customers is invariably, what is the nature of the work to be done, the weight to be drawn and the pace demanded or expected? A further point worth considering: there is a great deal of truth in the saying "as a horse goes so he lasts." True straight action is of great value: a horse that turns its toes out should invariably be rejected. "Toes slightly turned in," is not serious if it is not exaggerated. Personally, I do not like horses with extravagant action, for heavy work. An easy natural gait should be aimed at as far as possible. Another dislike of mine—the horse with abnormally large feet, no matter how good otherwise. I have never seen a case of laminitis in a small-footed horse, but have seen quite a lot in horses with so-called "beautiful" feet. A final dislike: any form of ring-bone, especially pyramidal disease—you are asking for trouble with both hands if you buy one of these, and it is a golden rule to lift up the hair on the coronet when examining a "heavy."

Horses with what in the north are called ankle-bones, or exostoses on the pastern, not properly classed as ring-bones, may do quite a lot of slow work, but there is a danger of a joint becoming involved and then trouble.

In conclusion, the gift of prophecy in connection with working horses is an extremely dangerous thing. Some of the most unlikely, misshapen, unsound beasts often last for years; others, typically correct, so-called perfectly sound, bring cruel disillusions.

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How I would Select the Typical Town Horse

W. K. TOWNSON, M.R.C.V.S.

In asking me to express my views on choosing the ideal town horse, you have set me a task. Characteristics in outlook and general formation strike naturally to the practised eye, yet to define such is another proposition entirely, for one can oft-times find two horses cast in different form, yet both may be suitable for town work.

Bearing in mind that "weight moves weight" I should select the Shire town gelding or mare, the former for preference. Not only is the Shire the heaviest limbed, but Shires generally possess the important attribute required for town haulage, *viz.*, weight with activity, allied to constitution. These three essentials are found in the Shire to a far greater extent than in any other draught breed.

My ideal would stand anywhere from 16·2 to 17 hands.

As a youth I was taught the old axiom "No foot, no horse," so, adhering to parental instruction, my first desire would be for good wide, deep feet, with a reasonable depth of heel. Next in importance I should place correct limb structure, the definition of which is rather lengthy, but comes naturally to the practised eye. I should require clean sloping pasterns, not too lengthy—this applies to fore and aft.

The bone must be flat with a minimum amount of silky hair; I should look for short dense cannons, big knees, shoulders well set, ample heart room and arm muscle, the hind leg to possess the requisite angle, not quite to the extent looked for in the show ring. The broad flat hock is usually associated with a good angle, but too much turn, in my opinion, means loss of power to a town horse. The thighs should have ample development and be muscled well down, and the hocks kept well together.

A horse with side-bones I should not entertain, except in the case of a really good type of animal, properly planted with extra wide coronets and good feet with sloping pasterns—the kind calculated to minimise pressure on the hoof heads.

Having dealt with the limbs, I should then look for constitution as another great essential, the back and quarters being most important. A reasonably short back, ribs well sprung, deep from the withers to chest point, rump and buttocks full and round with ample depth of body. Boiler capacity and a good sheath in a gelding invariably denote constitution.

Dealing with head and neck, clearness of eyes, which should not be too closely set, is most often a sure indication of good qualities in a horse. Head reasonably large and full of character, neck fairly lengthy and not too thick. Particular attention should be paid to action both fore and aft: the best example of a Shire town gelding stands far above any other draft breed when set in locomotion, particularly so in the use of his hind levers.

Added to the above, one must of course conduct the usual tests for soundness of wind and limbs.

"Horse Sense," largely the gift of nature, plays the most important part in choosing any horse.

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B.—General Discussion.

The discussion was opened by Colonel A. S. Head, who said that he wished to thank Dr. McCunn for introducing an interesting subject. What they wanted to find was a horse which would work and keep on working. Their difficulties, as veterinary surgeons in the country, were different from those which existed in London, and at the Royal Veterinary College.

Dr. McCunn had advised buying an eight years old horse if possible, and having a week's trial. If a buyer could have a week's trial for an eight years old horse, what need was there of a veterinary surgeon's examination?

They received instructions to examine a horse as to soundness, and the purchaser wanted a definite certificate. Purchasing or advising the purchase of a horse was an easy matter when one knew what one wanted and had instructions

to buy. Examining a horse and writing a certificate without seeing the purchaser was difficult.

From his point of view there were two sides to the question. One was that resulting from one's being a veterinary surgeon and the other was that from being a horse-master, which two things did not often go together. It was not necessary for them, in an ordinary examination, to know what sort of worker the horse was. If one was to buy one acted as veterinary surgeon and horse-master, or one took the latter with one.

Dr. McCunn raised the question of rat-tailed horses and wondered why they were often good horses. The rat-tail was a throw back to the Arab.

Reference was made in the paper to the examination of horses without the removal of gloves from the hands: well, eye-sight was often more useful than hands; a spavin could often be more easily seen than felt.

Many veterinary surgeons who were not good horse-masters followed the book too closely when making examinations. At the Colleges there was a tendency to teach that there were no sound horses, and students were taught never to pass a horse as sound—safety first at all costs. He had seen many sound horses all over the world, especially in Kentucky and Arabia, but in this country horses were worked as two-year-olds, this accounting for much unsoundness.

Veterinary surgeons were often too afraid of their own skins when examining a horse. They examined them with the determination that they would not find a sound one. Why go, if, before one left home, one intended to crab the horse?

It was a good plan to arrive at the place half an hour before the appointed time, and to see the horse in the stable after exercise. Important points in an examination were inspection of the poll region and the molar teeth. As to the eyes, he liked eyes which were prominent and wide apart. As to odd feet—one larger than its fellow—unless they were broken properly, especially in the case of hunters and polo ponies, the animals always led off with one foot, and the one they used most became the larger. A small foot might result from splint or other lameness. He did not like flat soles, or corns, or horses with capped hocks and capped elbows. Animals with the latter were clumsy when they lay down. Cutaneous boils were an abomination.

Everyone could not have an eight-year-old which had finished growing into money. A four-year-old increased to its full value at about six years old.

Mr. F. T. Harvey said that the subject of Dr. McCunn's address was one of considerable importance and he had dealt with it in an easy and interesting manner. He was in agreement generally with the views expressed and particularly with the opening statement that the commercial and economic aspects of the future of the horse should be considered from all angles and especially in regard to the types most suitable for the class of work in view. Unfortunately, in many areas there was little variation in type and therefore little choice in selection and men in want of horses had to take what they could get.

In rural districts they saw few commercial horses on the roads and the only equine whose future seemed assured to any extent was the farm or agricultural horse, a class which seemed on the verge of extinction for it had, so to speak, in the last 30 or 40 years, been almost Shired to extinction. But what was a farm or agricultural horse? Dr. McCunn had largely described the type, but there should be various editions according to the class of farming, size of farm, and fields, nature of the soil, etc. Formerly a variety of sires were available in most districts, but in Cornwall to-day the imported Shire was practically the only stallion to be seen on the road. The horse situation was somewhat of a tragedy and unless a more economic horse became available than was at present produced, more men than ever would be driven tractor-wards, in spite of their natural leaning towards horse power.

The Council of The Shire Horse Society and its panel of judges appeared to have paid more attention to show-ring fashions and pedigree than to the commercial side of the horse problem, and yet the latter was the all-important issue. Their policy dominated the County Agricultural Society generally and for many years practically only registered animals had had a look-in at all shows of any consequence. The octopus spread its tentacles everywhere and the show ring Shire had gradually displaced the old native mixed breeds formerly seen on the land, and had proved but often a very costly and inefficient substitute.

There had, however, always been men protesting, and they formed to-day a large body—men who wanted something besides bottoms (so-called), feather, pedigree, and an early demise. There was now a great shortage of suitable farm horses and matters were likely to become worse.

What was wrong? He could only deal there with a few of the factors which had determined the present situation. The parents of the majority of sires available to-day had never done a day's work in their lives and that had been so for generations. In these sires—over-bred, over-feathered and over-grown many of them—stamina and heart-lung capacity had receded into the background and this had resulted in an ever-increasing percentage of offspring which were bad breeders, soft-hearted, early-tiring, early-dying, slowly-moving machines, and out of place on the land under modern conditions. One might frequently see a "cobby" type of animal by the side of a big Shire drawing a plough or other implement and working his big colleague almost to a standstill and doing so day after day.

Two years ago he saw a team of lofty Shires return to the yard at mid-day after working on land in wet weather. Loaded with soil up to knees and hocks, the horses appeared exhausted and wanted nothing but rest. Presently an old clean-legged slinger horse came up briskly and went straight to the stall to feed while the others remained outside with heads down and apparently indifferent to food. This was not an over-drawn picture. One farmer was so horrified at the amount of material his horses were carrying on their limbs that he clipped them from knees and hocks down. He weighed the material, hair, earth, etc., from one horse and gave the weight as 33 lbs. Comment was needless.

He made these remarks with considerable regret, because he had always had a great admiration for a good cart-horse, but too many of the modern products were dismal failures. The breeding wastage was colossal and the number of barren mares seemed increasing yearly and the foal casualties were very high. The animals were handicapped throughout life with too great an abundance of feather, which brought many evils in its train and was a great life shortener. Stifle joint disease was perhaps common and also the formation of stifles and hocks bad, while thighs and gaskins were small, compared to the body weight—grave working defects.

The call to-day was for a better balanced horse with little feather, more constitution and less weight, and good heart-lung capacity. Propaganda and show-ring form no longer met the bill. They wanted a new horse or a new cross.

He used the term heart-lung capacity as being that used by Professor Leonard Hill and the late Martin Flack in describing the power of the machine to oxygenate the tissues under stress, and which was really the measure of the working value of the horse. One had often heard it remarked that such and such a horse had a poor middle and girth but that he had good bottoms and that a top could be put on—a great stunt with show-yard men—but heart-lung capacity was an inborn characteristic while a fat-produced top was merely a passing show. The incidence of heart disease amongst heavy horses had increased markedly in recent years.

Mr. R. H. Smythe observed that one gathered from Dr. McCunn's remarks that when advising in respect of the purchase of a commercial horse, he was in the fortunate position of having a large number of animals to select from and of possessing clients of the class to whom money was no object provided that they could obtain that particular type of animal upon which Dr. McCunn had set his heart. Unfortunately in the type of practice which Fortune had assigned to most of them, the converse more often held good and it was usual to have to make a choice from, at most, two possibles, with the knowledge that the whole transaction was being carried out as cheaply as possible. Of the two animals one had to choose from, the first was usually a good-looking horse, remarkably unsound, and the second a remarkably bad-looking horse, moderately sound. One usually ended up with neither and the following week a disgruntled client purchased on his own judgment an even worse-looking animal with every known variety of unsoundness and, such were the vagaries of Fate, this particular animal usually gave remarkably good service throughout a protracted life. He was quite aware (and no doubt the essayist was also) that although one must fancy this or that point, it was quite impossible to combine all these into one perfect animal. Commercial horses varied greatly in type and certain features. All the virtues, such as a small head, which Dr. McCunn might appreciate in a light active vanner would be completely out of place in a heavy Shire.

He did not wish to appear unduly flippant, but he did want to emphasise that conformation must always be viewed as a whole and he feared that if one of the members of the younger generation born in a mechanical age and now entering into the management of his firm, should happen to read Dr. McCunn's paper, this was the sort of composite horse he might seek to purchase. The animal would possess a small head with long ears and kind eyes, possibly slightly disfigured by cataracts. His mouth would be large with drooping lower lips decorated with a useful crop of whiskers. His head would be fitted to a short thick and strong neck. He would carry an oversize penis suspended from a big barrel carried low to the ground, supported on short thick legs terminating in upright pasterns and bell-shaped feet. His slightly roached back might well end up in a tail of the rat variety, devoid of hair, but, on the whole, he would be a gay fellow and a good sort. With a few harmless spavins and thoroughpins thrown in, it should not cause surprise if our young stud manager decided to commence his search in the neighbourhood of a Scottish loch. (Laughter).

Speaking of faults in conformation, he was surprised that the essayist had not devoted more space to the consideration of the shoulder, which was, after all, one of the most important features in a draught horse. Too flat shoulders, wedge-shaped shoulders and shoulders too full in the suprascapular region all made against proper collar work. As to the fore limbs, it was equally important that the elbows should be well placed so that the forearms lay well behind the shoulders. This not only maintained balance but also helped to make use of the animal's own weight in starting and pulling a load. Another weak spot in very many horses nowadays was a poor development of the second thigh, which should be heavily muscled. Straight hocks usually accompanied upright stifles and were frequently compensated for by bog spavins which appeared to act as a buffer and limit strain and concussion. Attempts to lessen the amount of fluid present in a boggy hock, if at all successful, usually converted a moderately useful animal into a lame and completely useless one.

True ring-bone was nearly always associated with lameness, but simple exostosis of the phalangeal region in the fore limbs was seldom the cause of prolonged lameness, provided that the exostosis did not extend below the coronary band. He would often prefer a hard-worked horse showing such exostosis to a young untried animal, so far sound, from the aspect of pure utility.

Side bones did not, in his opinion, cause lameness, unless associated with low ring-bone. They were less dangerous in upright blocky feet than in feet which had a greater circumference at the ground surface and a corresponding pinching action at the coronary band.

They should distinguish between true articular spavin and simple exostosis of the tarsal bones, just as they did in the case of true and false ring-bone. He would rather risk a horse with two large spavins than with one very small one.

He did not think that sufficient attention was always paid when examining, to the less visible parts of the horse such as the molar teeth, the soles of the hind feet and the anal region. There were traps for the unwary in all these places, and it must not be forgotten, too, that one should watch the vendor as much as the horse. He agreed with Mr. Harvey *re* feather being a nuisance.

Mr. E. B. D. Hall regarded it as high time that the orthodoxy in examination of horses was overhauled. If a lump on a horse's leg did not interfere with his action, why make a song about it? If anyone wanted a museum specimen without lumps he could have it, but this should not be a reason for condemning a horse which went through life without sickness or sorrow, and did all that was required of him in his natural sphere of usefulness. Corns were curable. The condition which caused corns was that the inner structures of the foot were down at the heel. In these cases the sole at the heel would be found to be one-quarter to one-third the thickness of the sole at the toe. On paring away the sole at the toe to bring the two surfaces of the sole parallel and the inner sensitive sole parallel with the ground, the corns would disappear. A distinction should be made between a simple ossified cartilage in a heavy horse, and a side-bone with exostosis which would often overhang the coronet, and cause a lot of trouble. During four years cavalry experience in France he rode two unsound horses—one

had megrims and the other sesamoiditis in a hind limb without any noticeable enlargement. The latter went lame with any severe exercise. The horses were of all shapes and sizes, but the ponies could do more than the artillery type. The worst horse he rode was a cob which did not know where it should put its feet, but he imagined it could have been passed perfectly sound. He quoted Professor Macqueen when he said "it is no part of a veterinary surgeon's work to be a private detective." All that was required was to examine a horse in a proper manner. A lot could be saved by giving him a "cold show." If a horse went perfectly sound, all the bumps would not affect his usefulness.

The Reply

Dr. McCunn thanked Col. Head for opening the discussion, and repeated that he considered eight years old as a good age for the purchase of a commercial horse. It was the commercial side of the animal which he viewed. If the demand in towns ceased, breeding would decline. It would pay a farmer to buy a two-year-old, work it for a few years and then sell it at a profit. But a mature horse was necessary for town work; his bones had set and he was less likely to suffer damage to them. It was desirable that a veterinary surgeon should be a horse-master, but it was not absolutely essential. He personally thought it was desirable, for if one attempted to buy on a purely technical examination one would buy none. Col. Head was probably right as to the origin of the rat tail. He knew of a man who never took off his gloves to make an examination, and there was something in the idea that "what you cannot see, you cannot feel." If one felt before inspecting at all paces one would imagine all sorts of things. American horses at six, seven and eight years old had been brought across. They were clean in the legs but they could not stand up to the work. He did not suggest that one should leave home with the intention of crabbing a horse—there was no need to look for trouble. Students were too nervous. Reasonable precautions should be taken, however. It was a good thing to arrive half an hour before the appointed time, but it might lead to suspicion: he had heard Prof. Macqueen say that one should arrive the night before. The teeth must be good; they were on a level with the importance of good feet. He agreed that odd feet might be sound. He was in agreement with Col. Head as to the importance of corns, capped hocks and elbow tumours.

He agreed with Mr. Harvey that a new type of horse was needed. The present-day Shire horses looked all right from the front and all wrong from behind. Heart capacity was essential. The girth of a horse should be more than his height at the withers. The same remark applied to greyhounds: it had been said that there never was a fast greyhound that did not measure more around the girth than its height at the withers. Another measurement of value was from the nose to the fore feet and back to the angle of the haunch; this should form a triangle with equal sides. Feather was a nuisance, and especially since the introduction of the eight hours day. Legs were not cleaned and grease was on the up-grade.

In reply to Mr. Smythe, Dr. McCunn said that at one time there was a large selection of clients but not all had large money-bags. One of the worst features in connection with examinations was when one said a horse was no good, but the people purchased him and he lasted for years. Attention must be paid to the shoulders. They were bad if very wide at the top, especially at the level of the tubercle of the scapula. Bog spavins were an attempt by nature to counteract defects, and tapping them sometimes caused trouble. It was not always wise to tap either bog spavins or stifles. A true articular spavin was serious. There was not much need to worry about a large spavin. Something could often be discovered by watching the man who was leading the horse. He had seen Arabs who were just as skilful in this respect as were Englishmen.

Major Ascott had referred to the length of neck. He (Dr. Cunn) had the town horse in mind. A long neck might be the best. It was normal for a horse to feed from the ground, and a firm in London had effected an enormous saving in food by feeding horses so. They saved one pound of oats per horse per day. However, for the conditions of feeding which prevailed in most stables he preferred a short neck. With regard to the bell foot, he contrasted the shape of a bell as against that of a saucer. The modern show-ring seemed to favour a foot with no dome to the sole, and with the hair at the heel touching the ground, and nothing to hold the bone up. What was required was not too big a frog and a vaulted sole. It had been said that 80 per cent. of the horses in London had ring-bones in some form. Mr. Willis was a shrewd man, and he said a ring-bone never stopped him from buying a horse. Major Ascott rather exaggerated his opinion as to thrush. Many horses which came to London had slight thrush. He did not think the size of the penis was the cause of the infertility of which Major Ascott had referred. He agreed with the suggestion that farmers should be encouraged to breed, or more and more firms would be driven to the use of motors. He thought the breeding of purely show horses should be stopped: many stallions and dams had never done a day's work. He was not clear as to what Mr. Hall meant when he said corns were curable by thinning the heels. Sound ponies had ideal feet.

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* * * * *

CONFERENCE ON VITAMIN STANDARDISATION

An international conference on the standardisation of vitamins was held at the London School of Hygiene and Tropical Medicine recently. The conference was under the auspices of the Permanent Commission on Biological Standarisation of the Health Organisation of the League of Nations, to which body it will make its report. Professor E. Mellanby presided over the Conference.

The Veterinary Record

June 30th, 1934.

THE COMMERCIAL HORSE

In the current issue we reproduce some very informative and interesting communications by experienced veterinary authorities, which were read and discussed at a meeting of the Western Counties Division of the National Veterinary Medical Association a few weeks ago.

In these days of mechanisation the public mind is apt to think in terms of motor cars and motor transport. We need not quarrel with this view, for, after all, the motor industry is an essential factor in the life of the country, and it has come to stay and progress. But at the same time the interests of our oldest industry, agriculture, must not be forgotten, and it is right that agriculturalists should have every consideration in the raising of animals which are pre-eminently rent payers. It goes without saying that the average farmer cannot afford to buy a tractor to till his land. He must make use of horses, and on the principle that like produces like there is profit in the sale of horses broken in at young ages, and sold to commercial firms for work in cities and towns. It has also been conclusively proved over and over again that for short distance work in towns, and entailing frequent stops, horses are very much cheaper and handier than motors. Moreover, it would be hopeless to expect a small trader to go to the expense of a motor: he can only make a living through the use of his pony and cart.

Horses and horse transport have been blamed for slowing down traffic on the streets. This is quite a mistake, as any intelligent observer will admit. The slowing down of London's traffic is entirely due to the vast volume of motor vehicles of all kinds. Traffic blocks occasioned by as many as thirty to fifty buses and coaches, and several hundreds of motor cars, motor lorries and taxis are not infrequent in London, and especially when streets are wet during rain. On the other hand, to get along with greater ease and safety, horse transport invariably makes use of collateral streets.

As a follow-on to the articles in this week's issue it is proposed to invite prominent breeders to contribute articles on the breeding and use of commercial horses and ponies of various types. These should be of great interest to practitioners and students from the Animal Husbandry point of view, and coming from experienced laymen, ought to be of special value.

Annotation

MILK PRODUCTION AND CATTLE DISEASES—ADMINISTRATIVE MEASURES IN FORCE*

Where the danger to public health arises from a disease of the cow, the public may be protected by three means of varying efficiency. First, the disease may be eliminated from the cows—a possibility if the presence of disease can be determined at an early stage by test, as with tuberculosis. Second, partial protection may be secured by removal from the herd of cows giving infected milk, these being detected both by laboratory and clinical examination. Third, the milk may be rendered safe for human consumption by some form of heat treatment which will destroy the organisms without affecting the nutritive or the commercial (taste, colour and power to form "cream line") properties of the milk. It is contended that the process of pasteurisation, as defined by the Ministry of Health, fulfils these requirements.

Infection introduced into milk from human sources could be guarded against by preventing those persons handling milk at any stage who are suffering from diseases communicable by milk or who are carriers of such diseases, and by the insistence on scrupulous cleanliness in the handling of milk. It is impossible to insist on precautions which will eliminate all danger from this direction. Additional protection may be obtained by a satisfactory form of heat treatment, preferably as late as possible.

(a) Existing Legislation in Regard to Diseases of Animals.—Under the Diseases of Animals Act, 1894, the Ministry of Agriculture and Fisheries has certain general powers to issue orders to control other as well as rapidly developing diseases. These powers have been exercised somewhat with bovine tuberculosis and with contagious abortion but not with mastitis or Johne's disease.

The provisions of the Tuberculosis Order of 1925 are summarised and a table is given showing the numbers of cattle slaughtered under the Order from 1926 to 1932. It would appear that the number of animals slaughtered and the compensation paid has remained roughly constant throughout the period, the variation being from 15,000 to 19,000 animals and from £58,000 to £76,000 in compensation, the higher values being actually for 1932. It is concluded that the evidence points to the fact that the Tuberculosis Order of 1925 has done nothing to reduce the incidence of the disease nor has it done much to protect the public from infected milk, as the

* An annotation of Section III of the Report of the Cattle Diseases Committee of the Economic Advisory Council.

majority of the cows are not reported until towards the end of their lactation, or when in an advanced stage of the disease.

The Epizoötic Abortion Order of 1922, by which an owner of a cow which has calved prematurely within the last two months, must take certain specified precautions against bringing her in contact with cows belonging to others, is considered ineffective.

(b) Existing Legislation Relating to the Milk Supply.—Certain acts and orders supply a comprehensive code for the safeguarding of the milk supply throughout Great Britain. The main provisions of the code for England and Wales are as follows.

(A) *Provisions administered by sanitary authorities, namely, borough or district councils*:

(i) Cow keepers and dairymen must register themselves and their premises;

(ii) Cowsheds, milk stores and shops must fulfil minimum requirements with regard to lighting, ventilation, water supply, drainage and structural conditions;

(iii) Milking must be cleanly carried out and all utensils scalded or sterilised;

(iv) In England and Wales milk, with certain exceptions, must be cooled;

(v) Milk from cows recognisably diseased must not be sold; infective persons must not be employed to milk cows or handle milk;

(vi) Milk must be properly protected in transit.

(B) *Provisions administered by county councils and county borough councils*:

(vii) Local authorities may appoint veterinary inspectors for the purposes of the Acts;

(viii) All local authorities may take samples of milk;

(ix) Designations of milk are defined and selling of milk under the designation is forbidden except under license granted:

(a) to the producers of milk from tuberculin-tested herds, by the Ministry of Health,

(b) to producers of other graded milk, by county borough councils, or if they are unwilling to act, by district councils,

(c) to sellers of all graded milks who are not producers, by sanitary authorities.

The provisions as regards veterinary inspection are carried out with varying degrees of effectiveness. In Scotland all dairy herds must undergo a clinical examination at least once a year, whilst 16 counties provide three or more inspections a year as experience has shown that once is not enough. In some counties in England and Wales routine inspection is carried out along the lines required in Scotland. Nine counties carry out routine inspection by whole-time veterinary inspectors and eight counties by part-time veterinary inspectors. A certain number of urban district councils undertake the periodical veterinary inspection of cattle generally by part-time veterinary inspectors. In a few cases the sanitary inspectors themselves inspect cattle in the course of their normal inspection of cow houses.

The grading of milk.—There are four designations of milk: Certified milk, Grade A (t.t.) milk, Grade A milk and Pasteurised milk. Grade A milk may also be pasteurised. Details of their requirements are given. The effect of the system of licences and grades is to provide milk of a quality maintained by a system of public inspection for those consumers who are prepared to pay for it. The cost of the inspection is met, in part, by payments made for licences by producers and distributors, which payments vary considerably with the locality. Under one per cent. of dairy cows are in herds officially recognised as free from tuberculosis. The sales of designated milk as such are far below the supply and show no sign of expansion.

(c) The Effectiveness of Current Legislation in the Prevention of Disease and the Improvement of the Milk Supply.

It cannot be claimed that, except in certain districts where clinical inspection is being energetically carried out, there has been as yet any reduction in the extent to which milk at the farm is infected with bovine tuberculosis. It is agreed, however, that milk has been produced with greater cleanliness since the Milk and Dairies Order came into force, but the standard required by this Order is not, as yet, generally attained.

W. R. W.

RESEARCH IN BACTERIAL CHEMISTRY

The Medical Research Council announce the inauguration of new arrangements for further combined chemical and bacteriological investigations into the conditions which govern the life and multiplication of micro-organisms causing disease. These have been made possible by the co-operation of the Middlesex Hospital Medical School, the trustees of the late Lord Leverhulme, and the Sir Halley Stewart Trust.

Accommodation and facilities are being provided at the Middlesex Hospital in the Bland-Sutton Institute of Pathology and the adjoining Courtauld Institute of Biochemistry. The investigations will be directed by Dr. Paul Fildes, F.R.S., who has been appointed a member of the scientific staff of the Medical Research Council. The other workers are Mr. B. C. J. G. Knight, with a Halley Stewart Research Fellowship, and Dr. G. P. Gladstone and Dr. G. Maxwell Richardson, holding Leverhulme Research Fellowships.

The arrangements took effect on June 1st, and the support given by the co-operating bodies is sufficient for an initial period of five years.

* * * * *

The breeding of Clydesdales is a disease peculiar to Scottish farmers. Once contracted there is no known cure. Professor John R. M'Call, M.R.C.V.S., thought he was cured, but he was again among the winners at Hamilton with a daughter of Dupplin Castle.—*Scottish Farmer.*

Abstracts

[Discussion on Chronic Nephritis. (Proc. R. Soc. Med. XXXVII, 7, 789 *et seq.*)]

In the opening paper Dr. Dorothy S. Russell described the histological changes in primary ischæmic nephritis. The essential lesion was a "fatty-hyaline" degeneration of the intima and, later, the media of the smaller arterioles which produced considerable narrowing of the lumen. The consequent interference with the blood supply led to atrophy of the tubules followed by shrinkage of the glomeruli and a progressive collagenous thickening of Bowman's capsule with, later, further degenerative changes. In distinguishing between these ischæmic changes and true Bright's disease the glomerular lesions in the latter (*i.e.*, proliferation of the capsular epithelium, proliferation of the endothelium of the tuft, and focal necrosis of the tuft with adhesions to Bowman's capsule) were of the greatest help.

All transitions between chronic diffuse nephritis acris and the focal variety or chronic interstitial nephritis (nephritis repens) could be demonstrated histologically. The separation of the so-called "malignant sclerosis" as a distinct type of Bright's disease was not supported by the histological evidence.

Prof. J. Duguid described a type of chronic nephritis produced in rats by overdoses of vitamin D with a diet rich in acid sodium phosphate. This nephritis, which was progressive and of extreme severity, was primarily a tubular one, but it led in its later stages to interstitial fibrosis, glomerular atrophy and arterial thickening, all of which were regarded as important factors in the chronic nephritis of man. The experiments suggested that glomerular and arterial lesions could be results, rather than causes of chronic renal atrophy. Glomerular changes did not occur until the later stages and vascular changes began to appear only in long-standing cases. It was clear that the arterial lesions were secondary to the parenchymatous changes and possibly this was the order in which the lesions occurred in some cases in man.

Dr. Tom Hare dealt with 23 cases of chronic idiopathic nephritis in the dog. All had a similar history characterised by an insidious onset terminating in uræmia, but histologically five cases were classified as the early and eighteen as the late stage of chronic nephritis. Urine examination showed a lowered specific gravity, polyuria, the presence of albumen in small to moderate amounts and the presence of hyaline casts. The only constant lesions found *post-mortem* were those of nephritis and of uræmia. After describing the symptoms and *post-mortem* findings of uræmia, Dr. Hare gave a detailed account of the naked-eye and microscopic appearances of the kidneys in the cases under consideration, the principal characteristic being contraction of the organ with an opaque and thickened capsule adherent to the cortex. The study of these cases of chronic nephritis in conjunction with twelve cases of acute descending nephritis gave the impression of an orderly sequence of pathological changes and suggested that at least some cases of chronic nephritis were of infective origin.

Finally, Dr. Hare described eleven cases of chronic nephritis associated with osteoporosis. Although the clinical picture in these was dominated by osteoporosis of the skull ("rubber jaw") which histologically was an osteitis fibrosa, he had formed the opinion that the nephritis was the primary lesion.

In the discussion, Dr. W. Cramer referred to a type of nephritis produced in rats by feeding a synthetic diet from which all magnesium salts had been excluded. This condition, which was clearly due to an imbalance between magnesium and calcium, differed from the nephritis described by Prof. Duguid in that the glomeruli degenerated first and the tubules were affected later. The glomerular lesions resembled those that had been described for nephritis in man. Possibly a partial but long-continued imbalance between calcium and magnesium made the glomeruli more susceptible to the action of toxic agents.

Prof. J. G. Wright dealt with the clinical aspect of chronic nephritis in the dog, which he considered to be one of the commonest causes of death in adult animals, especially in males. The specific gravity of the urine gave the best indication as to the extent to which the disease had progressed. With regard to the ætiology of the condition, there appeared to be no evidence to support the various suggestions put forward, *e.g.*, distemper in early life, dental sepsis, excessive protein diet. "Cold" might cause a chronically diseased kidney to "flare up," resulting in death from uræmia within 48 hours. Chronic nephritis could not be cured but the animal's life could be made comfortable for months or even years by reducing the protein in the diet to a minimum and restricting exercise.

Dr. J. T. Edwards referred to the necessity for further study upon chronic nephritis in the dog. Contrary to Prof. Wright's experience, it was his impresson that a form of parenchymatous nephritis was common in cats. In the other species of domestic animals nephritis was comparatively rare and when encountered was usually of specific bacterial origin, as for example, pyæmic nephritis in "joint-ill" of foals, pyelonephritis in cattle, acute parenchymatous nephritis ("pulpy kidney") in lambs.

In some ways each species of animal was a law to itself with regard to disease of the kidneys.

A. B. O.

* * * * *

[The Connections between opacity of the Vitreous Humour and Age, Sex, Colour and Breed in the Horse. Nieland, R. *Zschr. Vet.-kunde.* 1934. *46.* 4.]

This work is in effect complementary to a paper on the same lines by Steffan dealing with the lens instead of the vitreous humour.

The work of previous writers on the changes in the eyes of military horses is reviewed and the statistics on vitreous humour opacity may be conveniently summarised in the following table. These figures refer to total vitreous humour opacity whether co-existent with lenticular opacity (cataract) or not.

Authors	Horses	Vit. Hum. Opacity	Percentage
Flemming	828	81	9·8
Kirsten	748	172	23
Vogler	763	68	9
Barabas	2,618	200	7·6
Steinbeck	140	35	25
Weiss	255	86	33·7
Schwendimann ...	59	2	3·4

The discrepancies are probably due to variations in the technique of examination and interpretation. Nieland used the "Neukla-Augenspiegel [a recent simple but efficient type of ophthalmoscope designed by Professor Neumann-Kleinpaul of Berlin Veterinary College]. The eye examinations were done without any restraint for the horse and without the use of a mydriatic. The results are given in several tables arranged according to the points of research set out in the title—*i.e.*, number of horses, eye changes and percentage; right eye, left eye or both; thoroughbred or crossbred; stallion, mare or gelding; brown [bay?] chestnut, black or grey —the numbers of affected subjects being arranged in yearly groups from one half year to 24 years. These tables are too large to reproduce in an abstract; suffice it to say that of 1,859 horses examined, 551 showed opacity of the vitreous humour (29·6 per cent.). The percentage of affected horses rose steadily with advancing years, 85 per cent. of horses over 20 years old, 47 per cent, 16 to 20 years old, 41 per cent. 11 to 15 years old, 31 per cent. 6 to 10 years old and 9·5 per cent. under 5 years old showing abnormality. Of the 551 affected horses 79 cases were bilateral, 253 involved the right eye alone and 219 the left eye alone. Geldings were more commonly affected than stallions or mares whilst grey horses were more commonly affected than chestnuts, bays or blacks, these three colours showing no notable variations amongst themselves.

The etiology of opacity of the vitreous humour is discussed and the author considers that in most cases it may be due to an acute inflammation of any specific infectious or non-specific origin. It appears to follow periodic ophthalmia in combination with changes elsewhere in the eye (choroid, lens, etc.).

Nutritional disturbance and senility evidently have a bearing on the condition also, particularly the latter, in the author's opinion.

Unfortunately the bibliography of the carefully numbered authorities quoted in the course of the paper has been omitted, by accident or design.

J. E.

* * * * *

[The Treatment of Otitis Externa in Dogs and Cats by X-ray Therapy. Pommer, A. 1934. *Tierärztliche Rundschau.* 11. *40.*]

The 72 cases recorded by the author were mostly of a chronic nature and had been subjected to various treatments over periods of one or more years. Clinically these cases showed inflammatory changes of the inner surface of the skin of the ear which were eczematous in character.

The animal is laid on its side and fixed firmly to the bench to prevent movement. A special rubber-covered lead shield, with a circle 4-5 cms. in diameter cut in the centre, 4 mm. thick by 20 by 25 cms., is used to protect the adjacent structures such as the eyes, hypophysis, etc., from injury. The shield is provided with eyes in the corners so that it can be fixed to the animal with tapes. The X-ray tube is adjusted so that the line of direction of the rays passes through the affected parts towards the wing of the atlas of the opposite side.

Dogs will usually lie quiet for a short period, but if both ears have to be treated the second one should be done after an interval of one day. The ear should be cleansed preparatory to treatment with 1·5 per cent. peroxide or ½-1 per cent. permanganate of potash, to remove all grease or moisture. In the intervals between treatment it is recommended that the ear be cleaned only once weekly as frequent interference is irritating and may exaggerate the artificially produced inflammatory condition excessively. Cooling lotions or non-irritant dressings may be applied after radiation but the use of preparations containing iodine, coal tar products or cocaine is contra-indicated.

To illustrate the reaction of the tissues to radiation Pommer quotes the experiments of Thielemann on white mice. The reaction is a vascular one, there being a hyperæmia of the area treated lasting a longer or a shorter time according to the degree of radiation. In the middle ear the reaction simulates the normal

process of inflammation, resulting in a sero-purulent exudate.

The author has divided his cases into three groups according to their clinical manifestations, a description being given of each type together with the results of his treatment and the radiation formula for the guidance of the operator.

The following is a short description of the three groups.

1. The inner surface of the ear is inflamed and the skin greatly thickened. In cases of more than one year's standing the hyperplastic proliferation is so great that there is no passage to the middle ear. There is excessive activity of the glandulæ ceruminosæ, resulting in the production of a quantity of thick, greasy, yellowish-brown secretion. The whole surface is devoid of hair and eczematous in appearance. The animal holds its head on one side and shakes it repeatedly.

2. The inner surface of the ear is covered with a layer of bran-like yellowish-brown scales or crusts which cause great irritation. Secretion not marked. The passage to the middle ear is considerably narrowed by a thickening of the walls.

3. The inner surface of the external ear is covered by irregular, dark-brown, bloody eruptions, the neighbourhood being devoid of hair. When cleansed the surface is observed to be eroded and greatly inflamed and the walls thickened. The parotid gland is swollen in cases of long standing. The author's results are very favourable.

N. S. B.

* * * * *

[**Measuring Fertility in the Ram.** McKenzie, F. F., and Phillips, R. W. *Journal of the American Veterinary Medical Association.* 1934. February, pp. 189-201.]

The long delay till such time as offspring appear and other disadvantages of using the breeding record as a measure of fertility are pointed out, and after mentioning the unreliability of a clinical examination, the authors deal mainly with a study of the semen from apparently healthy rams as an indication of their fertility.

Smears made from semen, recovered from the vaginas of ewes after service, were examined microscopically to determine the proportion of abnormal sperms present. It was found that semen from the first services of a season or services following a prolonged rest period give high counts of abnormal spermatozoa even in the case of satisfactory breeding rams, due probably to the continuous production and non-emission of sperms which undergo degeneration. After the degenerating sperms are cleared out, subsequent ejaculations give low counts of abnormal sperms in the case of rams of high fertility.

In rams of low fertility the total count of abnormal spermatozoa is much higher than in the satisfactory rams, the heads of the spermatozoa frequently showing abnormalities, and in most cases abnormalities of the bodies of the sperm cells are also present. Abnormalities involving the tails of the spermatozoa are found in satisfactory breeding rams after long periods of rest, but when continued breeding does not reduce the proportion of such spermatozoa, then they may indicate lowered fertility.

The authors also mention that in very fat rams the proportion of abnormal sperms may be increased.

It is concluded that an examination of the morphology of the spermatozoa reveals within reasonable limits the degree of fertility, more than 140 abnormal sperms per thousand indicating reduced fertility, provided the semen has not been taken immediately following a prolonged rest.

J. S. S. I.

Report

NEW SOUTH WALES

LIVESTOCK DISEASES REPORT OF THE DEPARTMENT OF AGRICULTURE FOR THE YEAR ENDING JUNE 30th, 1933. (MAX HENRY M.R.C.V.S., B.V.Sc.)

The report is a record of disease-control work.

The livestock statistics of the State, computed in March, 1932, were:—horses, 524,751; cattle, 2,993,586; sheep, 52,986,000 and pigs 385,846.

During the year a very definite step was taken towards improved co-operation between the veterinary activities of New South Wales and Victoria with the ultimate object of freeing interstate traffic in animals and animal products from unnecessary restrictions

Tuberculosis.—Owing to lack of staff and money the struggle against this disease moves forward very slowly. Under the tubercle-free herd scheme there are 88 herds, including 4,999 head, listed so far; in addition, three municipalities have been declared tubercle-free areas. During the year 3,908 head of cattle were tuberculin-tested, of which 0·69 per cent. reacted. In addition to work connected with the accredited-herd scheme, clinical inspection was made of 486,229 cattle, as a result of which 1,224 clinical cases were detected and their destruction arranged and 50 bulk samples of milk were subjected to the biological test, with one positive result.

Contagious abortion is a big problem. The conditions of stock management in Australia render control of the disease very difficult. An accredited abortion-free herd list is established and a small number of herds are listed. In

these cases the owners enter into an agreement with the Department of Agriculture, which can be cancelled by either side at any time, whereby the Department undertakes the necessary testing provided the owners will follow the Department's instructions regarding disposal of reactors. Reactors are disposed of either by sale for slaughter or a two-herd system is introduced. The use of vaccines is discouraged and live vaccines are prohibited except with the approval of the Chief Veterinary Surgeon.

Contagious bovine pleuro-pneumonia showed a marked decrease in incidence compared with the previous year, 28 outbreaks as compared with 86 being recorded. The disease is controlled by quarantine and slaughter of the affected animals, with preventive inoculation apart from outbreaks.

Anthrax also showed a decline; eight outbreaks as against 29 in the previous year were reported. The total number of animals vaccinated during the year was 146,556 sheep, 1,267 cattle and 5 horses.

Blackquarter was most prevalent in the northern coastal area, from where 50 outbreaks were reported. It caused heavy mortality in sheep in one district.

Actinomycosis.—499 cases of this disease were reported.

Piroplasmosis and tick control: Ten outbreaks of this disease were reported and the position shows definite improvement. Tick control measures based on scientific principles of eradication have met with much success.

Dairy inspection.—3,655 dairies were inspected during the year.

Black disease of sheep.—Losses from this disease are becoming lighter each year, and it would appear that improved control measures against fluke disease together with vaccination have had a helpful influence in this respect.

Lice and ked infestation of sheep.—The control of these parasites has been unsatisfactory, due primarily to financial stringency. Stock-owners in their desire to reduce costs have neglected dipping in some cases and this, coupled with scarcity of feed, necessitated the movement of infested animals and consequent spread of the parasites. Four hundred and fifteen holdings involving 782,507 sheep were quarantined during the year.

Worm infestation of sheep.—Hæmonchi and Trichostrongyles are serious menaces. Lungworms and œsophagostomes are also encountered. The most effective drenches for hæmonchosis were a copper sulphate and mustard mixture and carbon tetrachloride [doses and intervals not stated.] Medicinal treatment of trichostrongylosis was ineffective but infested sheep improved markedly when changed to rich pastures. In one property it was noted that while Merinos and cross-bred sheep evinced no symptoms of parasitism, Border Leicester stud sheep running with them suffered a severe mortality from that cause.

Pig diseases.—5,483 pigs were condemned on account of tuberculosis under the Swine Compensation Act, during the year. Other diseases dealt with thereby were septicæmia, pyæmia, pleurisy, peritonitis, septic pneumonia, enteritis, gangrene and cancer.

Research.—A sum of £1,500 per annum for five years has been allotted by the Australian Dairy Cattle Research Association for further research into contagious abortion. The work of the Research Institute included investigation into tick fever and allied conditions of cattle, sterility of cattle, deformity of calves, diseases of sheep and poultry, Queensland itch of horses and plant poisoning.

W. K.

LETTERS WRITTEN BY MR. TOPHAM, A YOUNG ENGLISH GENTLEMAN IN RESIDENCE IN EDINBURGH*

An Account of the Public and Private Diversions of the Inhabitants of Edinburgh

Edinburgh,
December 30th, 1774.

". . . . The diversion which is peculiar to Scotland, and in which all ages find great pleasure, is golf. They play at it with a small leathern ball, like a fives ball, and a piece of wood, flat on one side, in the shape of a small bat, which is fastened at the end of a stick, of three or four feet long, at right angles to it. The art consists in striking the ball with this instrument, into a hole in the ground, in a smaller number of strokes than your adversary. This game has the superiority of cricket and tennis, in being less violent and dangerous; but in point of dexterity and amusement, by no means to be compared with them. However, I am informed that some skill and nicety are necessary to strike the ball to the proposed distance and no further, and that in this there is a considerable difference in players. It requires no great exertion and strength, and all ranks and ages play at it. They instruct their children in it, as soon as they can run alone, and grey hairs boast their execution.

. . . I am sorry to say the hazard table is in high fashion and estimation. There are clubs in Edinburgh who may vie with White's or Almack's. But the misfortune is, there is a deficiency of ready money, which obliges them to keep books, by which they transfer their debts

* Meeting place of Congress, N.V.M.A., July 30th—August 3rd, 1934.

NATIONAL VETERINARY MEDICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND

Special Meeting of Council

A Special Meeting of Council, N.V.M.A., was held at the Conway Hall, Red Lion Square, W.C.1, on the afternoon of Thursday, June 7th, 1934.

The President (Mr. W. Nairn) occupied the Chair, and there were also present Capt. J. R. Barker, Messrs. H. Bell, H. W. Steele Bodger and H. E. Bywater, Capt. J. C. Coleman, Major T. Dalling, Captain H. W. Dawes, Major G. W. Dunkin, Mr. E. P. Edwards, Captain H. Tudor Hughes, Major H. Kirk, Messrs. E. C. Lloyd, J. W. McIntosh, G. T. Matthews and C. E. Perry, Captain J. R. Rider (Hon. Secretary), Lieut.-Colonel P. J. Simpson, Major F. J. Taylor, Captain W. K. Townson, Captain W. Tweed, Messrs. T. Wilkinson, R. A. Willett, and T. Wilson, Professor G. H. Wooldridge, Dr. W. R. Wooldridge, and Captain W. G. Wragg (Hon. Treasurer).

Apologies for absence were received from Dr. O. Charnock Bradley, Captain H. S. Cockburn, Lieut.-Colonel J. A. Dixon, Mr. James Dodd, Mr. P. F. Dolan, Major A. C. Duncan, Professor S. H. Gaiger, Mr. Arthur Gofton, Captain J. R. Hewer, Mr. W. J. Ironside, Professor J. Macqueen, Major-General Sir John Moore, Captain S. J. Motton, Mr. R. Barons Nelder, Mr. E. J. L. Norman, Major R. H. H. Over, Captain A. W. Noel Pillers, Major D. S. Rabagliati, Mr. J. N. Ritchie, Mr. G. A. Sangster, Captain R. Simpson, Major A. Spreull, Major J. H. Taylor, Mr. Alex. Thomson, Dr. A. W. Whitehouse and Mr. William Woods.

The President, at the outset, said that he thought he owed the members an apology for having called them there that day, but matters of considerable urgency arose which the officers of the Association thought should receive the attention of the Council, and the substance of which was embodied in the various memoranda which had been circulated to the members preparatory to that meeting.

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to one another. This renders it both inconvenient and troublesome to strangers to engage them: for, if you lose, their necessity compels them to demand immediate payment, and, on the contrary, if you chance to be successful, they refer you to twenty different people, before you can expect your money; and you have reason to bless your stars, if ever you obtain it. I do not know anything so disgusting or against the grain of politeness as being obliged to dun a gentleman for a game-debt; but here it is absolutely necessary: if you do not, you play without the least chance of being a winner. . . ."

The Reorganisation Commission for Eggs and Poultry

The first question on the agenda, proceeded the President, was to consider, at the request of the N.V.M.A. Advisory Committee on Poultry Diseases, the further statement of evidence prepared by them for the Reorganisation Commission for Eggs and Poultry. That statement had been circulated and the matter was now open for discussion.

Following is the statement:—

For the consideration of the Reorganisation Commission for Eggs and Poultry Further Statement of Evidence On Behalf of The National Veterinary Medical Association of Great Britain and Ireland

In compliance with the request of the Commission at the interview with representatives of the National Veterinary Medical Association on April 12th, we beg to submit further details of the views we hold concerning an extended veterinary service in connection with the control of poultry diseases.

At the moment diseases of poultry are not included in the Diseases of Animals Acts, though we are given to understand that legislation with this purpose in view is pending. When special legislation is brought into operation concerning any disease or group of diseases, the responsible authorities administering the Acts or statutory orders would naturally deal with the control of such diseases.

There exist, however, many diseases of poultry which, in all probability, will never come within the scope of any Diseases of Animals Act, or for the control of which no legislative measures will be brought into force.

A.—Field Service Organisation

We have shown that at present the measures of control of poultry diseases are either inadequate or absent, and we have expressed the view that the " position regarding the control of poultry diseases will not be on a sound basis until adequate facilities for research are available and the special qualifications of members of the veterinary profession are used to the best advantage."

We hold the view that a scheme should be put into operation whereby veterinary practitioners who have specialised in poultry diseases should be employed as part-time veterinary officers to control diseases of poultry in the field under the supervision of whole-time veterinary poultry officers stationed in the appropriate area.

For administrative purposes the country should be divided into areas, the size of which would depend on the poultry population. In some cases an area would consist of a county, in other cases it would consist of part of a county. (*See Appendix* 1).

The duties of the whole-time veterinary poultry officer would be mainly administrative and educational. The field work in connection with the control of poultry diseases should be carried out in the main by the part-time officers, a panel of whom should be created in each area.

We have pointed out that much of the control of poultry diseases is dependent upon the results of correct diagnosis, which can only be carried out at a properly equipped laboratory. A preliminary examination would be made by the whole-time veterinary poultry officer and for such

work a laboratory should be at his disposal. Details relating to the equipment, etc., of this laboratory are contained in Appendix II. Much of the work in connection with the diagnosis of the diseases of poultry in the various areas, however, will be done in the "provincial laboratories." Such provincial laboratories should be set up to meet the requirements of a number of administrative areas analogous to the organisation of the present veterinary advisory service, and we show later how these already established centres could be utilised to this end. The proposed personnel, duties and equipment of these provincial laboratories are dealt with in Appendix II.

B.—Research Organisation

Investigations into problems of national importance should be undertaken at the various Research Institutes already established, but as we pointed out in our first report, the number of workers engaged should be increased and the grants considerably augmented. The centres at present engaged in this work are enumerated in Appendix III.

The provincial laboratories will be expected to engage in the investigation of "local" problems on behalf of the officers in the administrative areas of their province.

C.—Training of Veterinary Poultry Officers (part- and whole time).

We have already stated that many veterinary surgeons in general practice are not yet in a position to undertake the duties of part-time veterinary poultry officers and we have given the reasons for this position. The question of specialised training for these posts appears to us to resolve itself into two problems, (a) the immediate training of veterinary practitioners to undertake the duties of part-time and whole-time veterinary poultry officers, and (b) the training of veterinary students who intend to qualify for these posts.

(a) We would suggest that a short course in poultry husbandry and disease control be arranged at various centres in the country where instruction in poultry husbandry and disease control is normally carried out. We realise that it is practically impossible to require veterinary practitioners to leave their practices for a period sufficiently long to undergo a lengthy course of training at any approved centre. We believe that it would be possible to arrange courses at various centres whereby instruction was given on, say, one afternoon each week for a period of two months. The training would be intensive and concentrated but would be sufficient to meet the requirements necessary for the setting up of a panel of veterinary practitioners employed part-time in the control of poultry diseases. Special arrangements would be necessary at the various centres but we do not foresee undue difficulties in this respect.

(b) A full course of instruction in poultry husbandry and disease control should be undertaken by the various veterinary colleges. Alternatively, it may be possible to arrange special post-graduate courses of instruction in poultry husbandry and disease control. The National Poultry Diploma Examination Board could possibly collaborate in such a scheme and grant special facilities to young veterinary surgeons.

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Appendix I.

This Appendix consists of (i) a map of England and Wales showing the poultry population in the various counties, the size (in acres) of the various counties and the areas covered under the present Advisory Scheme.

(ii) Lists showing suggested areas under the control of whole-time veterinary poultry officers.

(iii) Lists showing the number of part-time veterinary poultry officers required for the whole country.

(The total number of part-time veterinary poultry officers, *i.e.*, practitioners, necessary in England and Wales is estimated at 184, and the number of whole-time veterinary poultry officers at 41).

Appendix II.

This Appendix consists of (i) details of the equipment necessary for the laboratory at which the whole-time veterinary poultry officer for each administrative area will carry out the preliminary investigations into the various outbreaks of disease in his area. The necessary equipment is given in detail.

(ii) A list of the present Advisory Centres together with the administrative areas which each could serve.

Appendix III.

Appendix III enumerates the laboratories (state-aided and otherwise) at which investigations into diseases of poultry are at present carried out.

Appendix IV.

Appendix IV deals with the organisation in detail. It shows that the service consists of:—

(*a*) Part-time veterinary poultry officers (*i.e.*, practitioners).

(*b*) Whole-time veterinary poultry officers (*i.e.*, veterinary officers in charge of an administrative area).

(*c*) The present General Advisory Service.

(*d*) Central Research Stations (at present established).

Appendix V.

This Appendix consists of a map showing, in various counties of England and Wales, the centres at which instruction in poultry husbandry and poultry disease control is available at the present time, together with lists and tables amplifying the information given in the map. (This is intended as a guide in connection with the proposed short courses of instruction to veterinary surgeons who intend to qualify for inclusion in the panel of part-time veterinary poultry officers in the various administrative areas).

The Hon. Secretary asked that he might be allowed to give a somewhat brief outline of the problems presented to that committee, as they appealed to him. He could not profess any expert knowledge of the poultry industry, but he would like to bring before the Council certain points which, to him, were significant.

In the first place, the committee ascertained that the poultry industry had a capital value of £33,000,000, and was suffering a loss of £4,000,000 per year. Unless poultry diseases could be controlled, in a very short time—such was the feeling of the committee—there would be no industry to worry about.

The committee then put itself the question, was this a veterinary problem, or was it not?—and he thought they would agree with the committee that there could be only one answer.

Another point which was of some importance

was this: the industry itself was seriously concerned with its losses and was taking its own steps to remedy the situation. Therefore they seemed to be faced with the problem that unless a satisfactory veterinary solution could be found quickly, the whole matter was going to pass beyond the control of the profession. With that thought in their minds, some of them were deputed to wait upon the Poultry Commission and to express certain views before them. Major Dalling dealt very successfully with the research aspect of the problem; Mr. Downham with the problem of control of disease as it occurred in the field, while he (Captain Rider), concerned himself with some little problems of organisation, to see what might be done to bring a concentrated veterinary effort to bear on this question.

The first thing that seemed to him to be worthy of notice was that the Poultry Commission accepted without question the view that that problem was a veterinary one, and that they asked for detailed proposals. They (the deputation) impressed upon the Commissioners that the control of poultry diseases was really part of the major problem of the general control of animal disease. With that in mind, certain proposals had been drawn up, which were now before the Council.

He should merely like to say further, that a scheme, if it was to envisage control of animal disease in general and that of poultry disease in particular, must take into account the mobilisation of all veterinary resources. He felt that it was of supreme importance to recommend a policy sufficiently elastic to include such existing work as was being done at the moment and to embrace any future expansion. Unless they could get some general scheme into operation, it seemed to him that they were going to get a multiplicity of small and disconnected services each dealing with its own little problem, and the lack of co-ordination must lead to inefficiency. It appeared to be a confession of defeat to claim that any given problem was a veterinary one, and then to admit that it could not be dealt with sucessfully until a new profession was created.

He felt that this was the meaning implied by the recommendations of Government commissions when they proposed an expansion of veterinary services as and when suitable men were available. In the past the British veterinary profession had adapted itself successfully to new conditions. It had amply proved its value to the nation during the War. He believed that what had been done on that occasion could be repeated by the profession as it existed to-day. Given a sound administrative framework he thought the members of the profession would play their rôle in a mass attack on the disease problems which were now so prominent. Hence the deputation to the Poultry Commission advised the establishment of a system of part-time officers to control these diseases in the field.

His own view was that this service must be administered, co-ordinated and supervised by a whole-time Chief Veterinary Officer in a county or area. That, he thought, was a principle which had already been accepted by most people.

The Chief Veterinary Officer of a county should become the keystone in the arch of veterinary administration if the full effort of the profession was to be realised.

He had one or two suggestions to make following upon those introductory remarks.

On page 2, line 3, he would suggest that the words "under the supervision of whole-time veterinary poultry officers stationed in the appropriate area" be deleted and that the next paragraph should be re-drafted, somewhat as follows: "The administration and supervision of the control of poultry diseases should be undertaken by the whole-time Chief Veterinary Officer of a county—an official who might be termed County Veterinary Officer.

"This officer would be assisted by one or more whole-time veterinary officers who have specialised in poultry diseases. The precise number of such officers would depend on the poultry population of the county. Such an appointment appears to afford a suitable opening for a woman graduate."

Then as a temporary measure—since they must recognise that some counties had not appointed any veterinary officer: "In cases where a whole-time County Veterinary Officer has not yet been appointed the administration could be grafted on to the existing system for the administration of the Contagious Diseases of Animals Acts. We regard this procedure as a temporary measure, for we are convinced that the fullest benefit obtainable from an organised veterinary service will not occur until each administrative area has a whole-time Chief Veterinary Officer occupying his proper place in the hierarchy of the Local Authority."

The third paragraph—also on that page—which outlined the duties of the whole-time veterinary poultry officer, he suggested might be dealt with in terms somewhat similar to the following: "The duties of a whole-time veterinary poultry officer would be mainly those of a liaison officer, between the administrative chief and the field officers. He or she should also undertake educational duties, and possibly routine laboratory diagnosis. The field work in connection with the control of poultry diseases should be carried out in the main by the part-time officers, a panel of whom should be created in each administrative area."

He hoped to refer to the next paragraph—the fourth—under the question of the provision of local veterinary laboratory services, and in

that case he thought perhaps it would be well if they could take into account the various diagnostic procedures now in use or which might be expected to develop in the near future. A wide view of that problem took into account routine work which was now being done under the Milk and Dairies Orders, work which might be necessary for the effective control of poultry diseases, and such miscellaneous diagnostic work as might be required by the practitioner of the future. One preferred to regard that work as of a routine or repetitional character, as distinguished from original research work undertaken by the Research Institutes. It appeared to afford another suitable avenue for the woman graduate. Various possible solutions of the problem occurred to mind, and the Council should decide which policy was more likely to prove efficient in the long run, and to avoid the wasteful procedure of duplication.

The three things that had occurred to his mind were, first, the establishment of an independent veterinary laboratory for each county, which would undertake all routine diagnostic work for the veterinary services of the county, and under suitable conditions undertake laboratory diagnosis for practitioners in the area. Under certain circumstances counties might combine to establish a laboratory to serve their interests. Administrative control of these stations would be in the hands of the County Veterinary Officer.

The second solution was, would it be possible to use the existing laboratories of Advisory Officers to undertake the duties outlined above? This would be in addition to any preliminary research which they might perform, and would necessitate the negotiation of a satisfactory working arrangement.

A third situation occurred in those cases where a county already maintained a laboratory for its medical services.

Would it be desirable and satisfactory for veterinary officers working in such laboratories to do routine veterinary diagnostic work there?

It was assumed that the larger research institutes would wish to be relieved of routine diagnosis, except perhaps for their own immediate districts. In such a case they might wish to establish a special department for the work.

Concluding, Capt. Rider said that he might have gone beyond the immediate terms of that document, but he did feel that the time was ripe for them to take a wide view of that matter. It was not much good for them to look on tuberculosis or some other problem without seeking to connect the whole. Some might say that that was a Utopian attitude. But without a goal before the profession, towards which to direct their energies, he failed to see how progress could be made.

If the President would tolerate a mere Sassenach quoting a Scottish saying, he would remind the meeting that there was more than an element of truth in the proverb "Bode a silk gown and you may get the sleeve of it."

Dr. Wooldridge enquired when that evidence had to be submitted to the Commission. It seemed to him that that was rather the overruling point at the moment.

The President: "Now."

Dr. Wooldridge said that, in that case, he submitted that it would be better for the Council to accept that report as it had been circulated. The report, to a large extent, took into consideration existing veterinary institutions; it did not include the Chief Veterinary Officers, but owing to the fact that they had got many different veterinary services in this country, he for one saw no difficulty in just adding one more to that number for the time being.

He heartily agreed that they must review the whole problem, but at the moment they must remember that they had to submit that evidence at once. He had read the document, and personally it seemed to him a very admirable document indeed, and one that would go far in benefiting both the poultry industry and the veterinary profession. He would move, therefore, that the report be adopted.

Mr. Wilson said that he would like to second the motion because, speaking as a general practitioner, he thought it was a scheme that wanted putting into force.

The President observed that, before he put the motion to the vote, many of them would like to hear Major Dalling on that report, for he was Chairman of the committee responsible for the drafting of that document.

Major Dalling, in response, said that the Council would now see what were the Committee's findings on that matter. They felt very strongly that unless the veterinary profession took up a very strong position now, it would very soon be over-ruled by the lay people.

There were, he thought, few veterinarians who took any interest in the control of poultry disease, and the poultry people realised this. The result was that they were not consulting the veterinary profession when they should do; they were going elsewhere, and they were getting information which was inaccurate. Thus we had no control whatever over disease in poultry.

Capt. Barker observed that, while he agreed with the report in its entirety, it did envisage the setting up of whole-time veterinary officers to control disease: there was nothing in the report about the general practitioner being called in to advise an ordinary client who had a variety of stock, including poultry. He did not look forward with any pleasure to the time

when the whole-time veterinary officer could attend poultry on any man's farm.

They would know that there was a committee sitting to enquire into the present working of the Veterinary Advisory Scheme, and one of the points they would make on that committee was that the services of the Veterinary Advisory Officer should only be available through the practitioner. If that report bore upon the Advisory Officer scheme, it cut across the point which they wished to make when they subsequently met the officials of the Ministry of Agriculture in regard to that scheme.

Major Dalling, replying, said that, in connection with the present advisory system their view was that the Veterinary Adviser should be used for the work of diagnosis. The scheme was that the part-time veterinary officer who did the field work in connection with poultry diseases should consult with the whole-time veterinary officer. The whole-time veterinary officer had at his disposal certain laboratory equipment whereby he could make certain examinations. If he found that this work was beyond him, he could then call in the Veterinary Advisory Officer.

Mr. Steele Bodger suggested that in each case where the words " part-time officer " appeared in the report, the words " general practitioner " should be substituted.

Major Dalling: " I accept that."

Mr. Steele Bodger desired to emphasise what had been said in support of the adoption of the report as it stood, though he was in no way casting any reflection on Capt. Rider's further suggestions. He did think, however, that that report was bound up with the whole of the future policy of that association, and he would have been inclined rather to consider it in conjunction with the wider issue they had to consider later that evening.

The President: " The motion before the meeting is that we accept the report as circulated, subject to the amendment accepted by Major Dalling."

The motion was now put and carried *nem. con.*

Technical Committee on Abattoir Design

The next business before the meeting was to approve evidence prepared by Messrs. Tweed, Dixon and Young for submission to the Fat-stock Commission's Technical Committee on Abattoir Design by June 9th.

The President: " Copies of this evidence, also, have been circulated."

The Secretary informed the Council that the committee was appointed by the Minister of Agriculture upon the suggestion of the Reorganisation Commission for Fat Stock, to consider and report on the technical requirements as regards output, structure, lay-out and equipment of factory abattoirs in the light of modern practice at home and abroad in the processing and handling of meat, offals and by-products.

The President: " You have the work of this sub-committee before you. Has any member any remarks to make on this question ? "

Mr. McIntosh said that he thought the Council, as a whole, knew very little about a subject of that kind. They had before them the statement submitted by three experts of their own profession, and he thought they could not do better than approve of it as it stood. He therefore moved its reception and adoption.

Major Dunkin and other members, while voicing their appreciation of the work of the sub-committee, expressed the view that certain portions of the statement of evidence were worded somewhat ambiguously, and after some discussion it was agreed " that the statement be accepted, on the understanding that it be edited in the office."

The revised statement of evidence is as follows:—

For the Consideration of the Technical Committee on Abattoir Design. Evidence on behalf of The National Veterinary Medical Association of Great Britain and Ireland.

Abattoir Lay-out and Construction.

1. The site of the central abattoir in an area should have direct access to railway sidings.

There would be no objection to it adjoining a fat stock market, but, as a measure for the prevention of spread of disease, the contact of a store stock market and an abattoir should be discouraged.

If the central abattoir is situated in a producing area, the meat must necessarily be transported under proper storage conditions to the consuming area, all other slaughtering premises in the area being considered part of that area scheme.

2. The abattoir lay-out should provide for animals entering the lairage at one end and meat being taken away from the other end, the through-put working continuously in one direction.

There should be covered communication between the different parts of the premises so that all operations are carried out under cover.

3. Generally speaking, the abattoir should be divided into killing units as follows: for (1) cattle, (2) sheep and calves (3) pigs, (4) diseased and emergency slaughtered animals, and also (5) accommodation for animals which have died in transit.

A detention room and a storage room for rejected meat should also be provided.

4. Where practicable, public abattoirs on the factory principle would be in the best interests of the farmers, meat traders, meat inspection, and economy in the utility of all by-products. In rural districts arrangements for branch slaughterhouses of suitable design could be considered.

5. *Lairage.* Pens should be so arranged as to allow for the separation of different animals and to accommodate lots of varying numbers. Standings for cattle similar to those in cowsheds where animals are stalled in parallel rows tied by

chains, or the American yoke principle, should be provided. This facilitates inspection, watering, feeding, cleaning and bedding, and also preserves body heat when the animals are standing in rows. A number of pens should also be provided for separating the animals of different lots and accommodating dangerous animals. An adequate water supply must be provided for all animals where they require it, and the rows of standings so placed that the animals may enter from the unloading or entrance platform. The passage ways must be non-slippery, either grooved-cement or tiled-flooring being used.

6. *Slaughtering and Dressing Halls.* Animals should enter at the fewest possible points, to be stunned by a mechanically-operated instrument. The animals should then be hoisted and conveyed to the required position in the slaughterhall for dressing and inspection, each part of the operations being carried out by persons specially employed for that purpose. This would facilitate the primary processes, the collection of blood, and organise and speed up the slaughter process.

Electricity, recently introduced for stunning animals, can be recommended for sheep, calves and pigs. In the case of cattle it can be used if the bleeding is carried out on the floor, but if the animals are to be hoisted for bleeding it is preferable to use a captive bolt pistol, care always being taken in the bleeding of these animals when suspended so that the substances of the tongues are not filled with blood.

Cattle should always be driven up passage-ways into a stunning pen in preference to roping them.

For pig slaughterhalls, mechanical scraping is to be recommended, and singeing machines are necessary for the preparation of some bacon products. Hoists driven by electricity as well as other electrical appliances are quite satisfactory. An extraction system for removing steam and keeping the temperature of the steam raised by heated air entering the hall, prevents condensation and fog in the proximity of pig slaughtering.

Adequate provision must be made in the slaughterhalls for the receipt of offal before inspection, and for its subsequent transportation. This can be in the form of carriers suspended on rails, or on the moving platform principle, provision being made for the offal from each animal being easily identified with the carcase.

We recommend the open hall system and a system of marking the animals, meat, and offal from the time the animals enter the premises to the time the meat is dispatched. In large abattoirs offals, such as stomachs and bowels, are best removed from the slaughterhalls by means of sloping chutes, to offal rooms below, where they can be opened and cleaned, their contents collected and treated by a hygienic system, such as the Shone Pneumatic Automatic Ejector. This offal room should not be placed below the ground level if it can be avoided. By the above method blood can be conveyed by pipes from the bleeding trough to receptacles and can then be submitted to the various manufacturing processes.

There should be an adequate supply of hot water and containers for cleaning and sterilising cloths and other appliances used in dressing carcases, to prevent contamination of the meat in the slaughterhalls, which is of great importance in regard to the keeping quality of the meat. Receptacles for the removal of all material which has been rejected as unfit for food are necessary.

A system of ventilation whereby air is blown into these rooms with a natural outlet for its removal has been found satisfactory.

7. *Hanging Room.*—This should be a covered space adjoining the slaughterhalls where the carcases may be placed, and protected from contamination before entry to the cooling hall: the carcases may be graded at this point, if desired. By-pass rails would be necessary here for drafting carcases to particular places such as the detention room for final inspection, or to the condemned-meat room for disposal in a by-products plant.

8. *Office Block.*—This should be situated in a central position in the abattoir, be in communication with outpost offices at the entrance gates, workshops, etc., and in this block should be the detention room for carcases, laboratory, and first-aid room, or other similar provision connected with administration.

9. *Cooling Halls and Cold Stores.*—These should be so placed as to facilitate the transport of meat from the slaughterhalls or to a meat market. To overcome varying temperatures and danger to the meat, suitable air lock provision should be provided, and access to these storage rooms should be restricted to approved persons.

10. *By-products.*—In this country it has not been the practice to carry out manufacturing processes to any extent on the abattoir premises. This is often due to the lack of hygienic machinery, the situation, or lack of space in the abattoir premises, but we submit that with the improved machinery presently available, these processes could now be so placed on the premises as to avoid any contamination of the meat or sanitary nuisance.

11. *Private Slaughterhouses.*—We submit that most of the difficulties of the meat inspection problem in this country are largely due to the fact that the private and not the public slaughterhouse is the one in general use. It has unfortunately to be acknowledged that, as a result, in England and Wales the control of the slaughterhouses and the meat inspection are also in urgent need of improvement.

We feel that the position in regard to meat inspection in this country will not be on a sound basis until adequate facilities for the concentration of slaughter are provided, and the special qualifications of members of the veterinary profession are used to the best advantage.

12. The economic disposal of unsound and diseased meat and offal and the manufacture of by-products are also rendered more difficult, if not impossible, by the use of private slaughterhouses.

Private slaughterhouses are generally classed under the following headings:

(i) Those slaughterhouses which are registered and not required to be licensed; that is to say, slaughterhouses existing at the date of and registered within three months from the passing of the special Act bringing into force the slaughterhouse provisions of the Town Improvement Clauses Act, 1847; such slaughterhouses have been continued ever since.

(ii) Slaughterhouses licensed since the date of the special Act referred to (generally the Public Health Act, 1875) and before the adoption of the Public Health (Amendment) Act, 1890.

(iii) Slaughterhouses licensed since the adoption of the Public Health (Amendment) Act, 1890. These licences endure for a period of not less than 12 months.

14. To discontinue the use of these private slaughterhouses, the owner of a registered slaughterhouse may have to be compensated for his freehold interest, but it is not generally recog-

nised that there is a right to compensation in the holder of a licensed slaughterhouse.

15. In order to make an abattoir undertaking successful in an area, it would be desirable that the Government should confer powers upon local authorities or other abattoir authority appointed by the Government, to establish public slaughterhouses, and prohibit the future use of all private slaughterhouses within a given area. Power of compensation should be limited to registered slaughterhouses, and some financial and administrative provision towards this measure should be made.

16. Further, that the Corporation of any borough having not less than a specified population should be authorised to continue their present public abattoir undertakings with the necessary additional powers to prohibit the future use of all private slaughterhouses within their area.

17. Provision should also be made for the combination of local authorities in the case of closely populated districts which adjoin. It is difficult to see why each authority should possess a central slaughterhouse or abattoir when the case would be fully met by a combined abattoir for the whole area. If this were done, more money would be available and a better, larger, and more economical unit could be erected to serve the whole district.

18. The same powers should also be granted to county councils, as the question of transport, which used to be the deciding factor, has been solved by the universal use of motor vehicles, which can serve a reasonably large area as readily as a small one.

19. If concentration of slaughter in a given area were instituted by centralising the abattoirs within the area of one authority, the financial arrangements involved would be a matter to be dealt with by the scheme.

20. According to information obtained, it is fully realised that there are many private slaughterhouses which are of such size and character, and possess such facilities for the inspection of meat, that they would naturally have to remain, as for instance at Birkenhead, where some of the slaughterhouses are controlled by the Mersey Docks and Harbour Board, and perhaps in the case of some large slaughterhouses controlled by Co-operative Societies; but with regard to the use of private slaughterhouses, a strong case would have to be made out were they to be retained and the grounds for their retention must include the following factors:

(*a*) Suitability for bacon factories.

(*b*) Distance from the proposed site of concentration of slaughtering.

(*c*) Size, construction, and local situation.

21. We suggest that each selected area should have a central public abattoir and that in addition to any charges made by the central abattoir for the slaughtering of animals thereat, a charge could be made in respect of each animal slaughtered in the area of the scheme, whether such slaughtering takes place in the abattoir or not.

22. The inspection in each area should form part of the general scheme as a whole and should be carried out under veterinary supervision.

Advantages of Concentration of Slaughter

23. It would be to the general advantage of local authorities in that it would lead to an improved meat supply and, as a consequence, an improvement in the health of the people, and to a saving in the expenditure upon the administration of the Diseases of Animals Acts and Meat Inspection. It would ensure uniformity of inspection by having up-to-date and efficient appliances, together with a similar control over all slaughtering carried out in different areas.

24. Meat inspection should be carried out by qualified detention officers who would detain diseased meat and allow to pass any carcase or offal showing no disease or abnormality. This preliminary process in inspection would cause no delay or interference with the slaughtering. Detained material should go to a room set apart and then be submitted to a further examination by an Area Veterinary Officer or by a part-time Veterinary Officer, appointed as Meat Inspectors. All meat which is passed as fit for human food should be stamped with an indelible stamp; this would protect the meat trader against subsequent seizure other than for putrefaction.

25. The superintendence of slaughtering as well as the meat inspection in small premises should be carried out by the detention officer under the supervision of and in co-operation with the central premises authority in the same area, which premises would be supervised by a Veterinary Director.

26. There could be an insurance fund to cover loss of meat through condemnation for disease: all animals to undergo veterinary *ante-mortem* inspection before being admitted to the fund.

27. Condemned meat and offal could be suitably collected, controlled, and manufactured into residual products by the abattoir authority and thus any danger to public health in the area eliminated.

28. Collecting depots for various classes of meat, offal, etc., could operate to advantage and thus a better market would be provided for the disposal of non-edible offal and meat which cannot be disposed of in private premises.

29. An improvement in sanitary control would be provided by having all parts of the animal other than meat and edible offal retained on the abattoir premises to undergo preliminary steps in their manufacture.

30. It would ensure greater control of animals having, or suspected of having, any of the scheduled contagious or infectious diseases, if the Veterinary Director and his Veterinary Staff were given the powers of Veterinary Inspectors under the Diseases of Animals Acts and thus enabled to take action at once in connection with any contagious disease.

31. It would provide a means whereby the slaughtering of animals by humane and up-to-date methods could be adopted and the condition known as "splashing in meat" avoided by the use of mechanically-operated stunning instruments.

32. It would eliminate the unsatisfactory position which exists at present in the inspection of meat transferred from one local authority to another for sale and would allow one area to accept meat inspected and stamped in another area.

In this memorandum we have confined ourselves to an exposition of the broad features of the problem as we see it, but should the Committee so desire, we are prepared to present a more detailed exposition of our views as to the nature and scope of the facilities which should be provided for the slaughter and inspection of animals and meat intended for food.

Cattle Diseases Report

In introducing the next item—"To receive recommendations of the Cattle Diseases Committee of the Economic Advisory Council"—the President described this as a matter that

would make a considerable appeal to a large body of the profession. The committee in their report had raised many questions affecting the interests of various sections of the profession. The whole-time men had received considerable help in this report and some practitioners might think they had been rather harshly dealt with. The report was being brought before the Council that day to learn, if possible, the views of the members concerning it. [The summary of principal conclusions and recommendations (circulated to members of Council prior to the meeting) was published in our issue of June 9th.—Ed.—*V.R.*]

At this point the Secretary read the following letters, regarding this matter, which had been received from Major A. C. Duncan, of Cirencester, and from the West of Scotland Division, N.V.M.A.

In the course of his letter Major Duncan wrote:

"I regret my inability to attend the more because I should have wished to register objection to Clause 6 of the recommendations of the Advisory Council on Cattle Diseases, where it is proposed to place the testing of cattle with tuberculin eventually in the hands of officers of a state service.

"I doubt not that others will call attention to this paragraph. Such action will contribute to the ultimate extinction of the veterinary practitioner. I know in my own case it would probably reduce my work by at least 25 per cent. and I feel sure that I speak on behalf of the practitioners in the Division which I represent."

The letter from the Secretary of the West of Scotland Division, included the following:—

"At a meeting of this Division held on May 16th, the following resolution was passed by the members present, and I was instructed to send it to Council:

"'In view of the grant of £750,000 promised by the Board of Agriculture, this Division would ask the Council N.V.M.A. to make representation that the local practitioners be *nominated* to co-operate in any scheme or schemes to be carried out under this grant. That the representation be especially made to the Board of Agriculture, the Department of Health for Scotland, and the Convention of of Royal Burghs for Scotland, and any other bodies that they think necessary.'"

The President observed that the question raised by the letter from the West of Scotland Division was one that would probably be dealt with by the Milk Board, but of course they were interested in any decision concerning it to which the Board might come.

In regard to the report as a whole, he would suggest that the Council should discuss it to some extent that afternoon, but appoint a committee to examine it and report to the July meeting of Council. He would move, from the chair, accordingly.

The motion was seconded by Captain Townson.

Captain Coleman said that one of the recommendations was that the testing of herds for the purpose of the Milk and Dairies Order should be transferred to the expanded veterinary service: did that mean that the part-time man was going to carry out this work?—because the next paragraph said that only whole-time officers should be employed in the veterinary service. Those paragraphs seemed to him to contradict one another. It would, in his opinion, be not only unjust but unwise to take away tuberculin testing from the part-time man, for some part-time men were expert in the work.

Mr. McIntosh said that he was one of those who could take an impartial view of that report, but he did visualise, in the report before them, the disappearance of the practitioner in a very short time if effect were given to its recommendations. He thought that would be a calamity—(Hear, hear)—and in his opinion this was a matter which should be dealt with very carefully by a special committee, though he was afraid that things had gone so far now that it would be very difficult to secure any alteration.

Captain Barker said that he looked upon the report as an exceedingly fine one and one that meant quite a lot for the veterinary profession, and if the committee could go to its labours knowing the views of the N.V.M.A., a great deal could be made of it.

The report envisaged the disappearance of tuberculin testing of herds used for the production of graded milk from the hands of the general practitioner, and the general practitioner was bound to lose the income he derived from that source. To that, of course, he could not look forward with any degree of equanimity, so that the question should be well discussed that afternoon.

The addendum by Sir Merrik Burrell reflected the views of that Association as expressed at its January meeting.

He would recommend that the Committee should be composed of the Chairmen of the various standing and other committees of the N.V.M.A. but, in order to exclude himself, he excepted the committee on Veterinary Advisory Officers ("No, No.")

Mr. Wilson expressed the view that the report had been drawn up with the idea that there was not such a person as the general practitioner. If tuberculin testing were taken from them, it was going to mean the extinction of the general practitioner, and he thought that the transference to whole-time officers of work that the general practitioner was quite competent, if not more competent, to perform was most unfair.

Unless something was done to stimulate graduates to go into general practice, he could see clearly that the general practitioner would be a thing of the past.

The report also stated that the whole-time man ultimately should hold a diploma in veter-

inary state medicine, but surely with the five years' course the curriculum should be such as to ensure that a man was capable of dealing with cattle diseases without having to take that supplementary diploma.

Captain Townson complained that not more than three or four general practitioners had given oral evidence to the committee; that was one of his main objections to the report—also the fact that one of the whole-time men was called to give evidence twice, as representing two bodies. He thought that this paucity of evidence from practitioners was entirely wrong and that probably the Economic Advisory Council had been misled by whole-time officers and others who had purposely left the part-time inspector—the practitioner—out of it.

Dr. Wooldridge thought that the Council were wasting time by going into the question as to who represented the veterinary profession at that enquiry, but they must not lose sight of the fact that the committee did consider the question of the position of the veterinary practitioner. On page 71 of the report it was stated: "Some witnesses have urged that the appointment of a whole-time staff of veterinary surgeons would be detrimental to the interests of veterinary practitioners generally. We do not accept this view, as the advice given by veterinary surgeons in the public service, by directing the attention of the farmer to the incidence of disease in his animals, tends to make him call in his own veterinary surgeon more freely for the purpose of treatment."

Other portions referred to the ultimate displacement of the practitioner from part-time work, and, in regard to the position in the sparsely populated districts, it was stated: "In certain sparsely populated districts where there is not sufficient private practice to support a properly qualified veterinary surgeon, the withdrawal of the steady source of income which employment as the part-time veterinary inspector of a local authority represents to the local practitioner, would probably have the result of forcing him to seek employment elsewhere." They then went on to say that in that case the man should remain as a part-time inspector.

It seemed to him from those two passages that any committee that dealt with that report, if it was going to oppose the report on the score that the position of the part-time man had been inadequately considered, must bring evidence accordingly. He submitted that the public health and other considerations dealt with in the report must lead any independent observer to the view that a whole-time veterinary service was really essential.

Mr. McIntosh observed that he thought he might say that the Cattle Diseases Committee was wrongly constituted: if any body should have had representation on that committee it was the Veterinary Profession, yet there was no member of the profession at all on that committee originally, and to satisfy the views of the profession one or two members were co-opted. The N.V.M.A. should have been the first to be consulted and given the opportunity of sending representatives to put the views of the profession as a whole before the committee, for its guidance and for the guidance of Parliament when the proper time came.

Mr. Steele Bodger urged that whatever was done should be done fairly soon because it was intended to put these measures into force in October—though it was extremely doubtful if they would be.

At Mr. Steele Bodger's request, the Secretary informed the council of the names of the Chairmen of the standing and other committees of the N.V.M.A.

Mr. Dawes said that, arising out of the probable terms of reference of that committee, he thought it essential that some of its members should be men who were engaged in practice and who had been actively engaged in the testing of animals under the Milk (Designations) Order.

Captain Coleman: "If Mr. Dawes puts that as an amendment, I shall be very glad to support it."

Mr. Bywater said that he did not know whether the members realised that that report was the report of a Departmental Committee, and evidence had been submitted to them by various bodies. The N.V.M.A. had already given evidence before that committee and in the light of the evidence submitted by that and other bodies they had accepted those points which they thought were the right ones. That report represented the considered opinion of the committee and, whatever the council did, he thought it would fail to "cut any ice" now. Therefore it behoved the council to move very carefully in this matter. He would further suggest that, if a committee of the council were to sit for the consideration of that report, it should include Sir John Moore, who was one of the committee responsible for the report.

Council eventually decided:

(i) "That a committee be appointed to examine the report of the Cattle Diseases Committee of the Economic Advisory Council."

(ii) "That the special committee be composed of the Chairmen of the Standing and other Committees and seven other members nominated by the Council."

(iii) "That the following be the nominees: Captain H. W. Dawes, Major A. C. Duncan (Cirencester), Captain S. J. Motton (Penzance), Mr. Steele Bodger, Mr. J. F. Taylor (Cathkin), Captain W. K. Townson, and Mr. T. Wilson (Nantwich)."

(iv) "That the terms of reference of the

N.V.M.A. Divisional Report

WESTERN COUNTIES V.M.A.

Jubilee Annual Meeting at Plymouth

The Fiftieth Annual General Meeting of the above Division was held at the Rougemont Hotel, Exeter, on Thursday, March 22nd, 1934.

The President, R. Barons Nelder, Esq., M.R.C.V.S., occupied the Chair, and an address on "The Selection of the Commercial Horse" was given by Dr. McCunn, of the Royal Veterinary College, London.

Dr. McCunn struck an original note by bringing with him remarks on the subject of his address which he obtained through the kindness of the following gentlemen: Major-General Sir John Moore, and Messrs. McIntosh, A. W. Noel Pillers, L. G. Gryspeerdt, C. Cunningham, W. K. Townson and R. C. Irving.

Messrs. Arnold and Sons, by arrangement with the President, provided a good selection of surgical instruments for the inspection of members.

The following members signed the attendance book: Messrs. R. B. Nelder, L. Norman, G. H. Gibbings, E. B. D. Hall, R. E. L. Penhale, R. H. Smythe, L. W. Bovett, P. Fisher, H. W. Townson, H. B. Kauntze, W. G. Blackwell, J. K. Irvine, E. Thorburn, G. D. Lansley, W. B. Nelder, J. M. Penhale, J. K. Patterson, C. Masson, E. R. Edwards, F. T. Harvey, S. J. Motton, C. Watkins, Colonel Head, Majors Ascott and Rankin. The following visitors were present: Messrs. Ewart, Godfrey, Salaman, C. E. Stuart Scott, J. T. C. Bradshaw, Dr. McCunn and Mr. E. W. Ascoli.

The minutes of the previous meeting, having been published in *The Veterinary Record*, were taken as read and signed as correct.

Correspondence.—(1) From Majors Dunkin and James, and from Messrs. Forbes, Menzies, C. Crowhurst, A. R. Smythe, Bloye, A. G. Saunders, R. G. Saunders, J. C. Stephens, J. Willis Thwaite, Roach, Macdonald, Wilkins and G. Harvey, apologising for inability to attend the meeting.

(2) From Mr. Matthews, Tiverton; (3) from the N.V.M.A., dated January 24th, 1934, *re* the International Veterinary Congress; (4) from the N.V.M.A., dated February 9th, 1934, *re* the "Dalrymple-Champneys" Cup and Medal, and (5) from the N.V.M.A., dated March 16th, 1934, *re* Representatives nominated by the Division to serve on the N.V.M.A. Council. These items of correspondence were dealt with and the Hon. Secretary was instructed as to the action to be taken.

Election to Membership.—The following gentlemen were unanimously elected as members of the Division: Messrs. Menzies, M.R.C.V.S., of Bristol, C. S. Head, M.R.C.V.S., of Helston, and C. T. S. Bradshaw, M.R.C.V.S., of Torquay.

Annual Reports.—The annual report of the Hon. Treasurer and that of the Hon. Secretary were read and adopted.

Election of Officers

The following were elected as officers of the Division for the ensuing year: *President*, Mr. R. H. Smythe, Camborne. *Vice-Presidents*, Messrs. R. B. Nelder, Blackwell, Townson and E. C. Bovett. *Hon. Auditor*, Mr. E. R. Edwards. *Hon. Treasurer*, Mr. R. B. Nelder. *Hon. Secretary*, Mr. S. J. Motton.

Council of the Division: The President, Hon. Treasurer, Hon. Auditor, Hon. Secretary and Messrs. J. M. Penhale and Norman.

Representatives on the Council of the N.V.M.A.: Messrs. R. H. Smythe, R. B. Nelder and S. J. Motton.

County Secretaries: Dorset, Major Fyrth; Somerset, Mr. A. G. Saunders; Devon, Mr. R. B. Nelder, and Cornwall, Mr. S. J. Motton.

It was decided that teas supplied to members at the meetings of the Division should be paid for from the Division's funds.

Address and Discussion.—The remainder of the meeting was devoted to the consideration of Dr. McCunn's paper "The Selection of the Commercial Horse," and of the supplementary communications, relative thereto, to which reference is made above.

At the conclusion of Dr. McCunn's reply to the discussion a very hearty vote of thanks was accorded him for his kindness in coming to Exeter and providing so much interesting material for discussion.

S. J. Motton, *Hon. Secretary.*

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committee be as follows: 'To consider the report of the Cattle Diseases Committee of the Economic Advisory Council; to decide what action, if any, be called for, and to report to the July meeting of Council, N.V.M.A.' "

Any Other Business.—The Council approved the suggestion of Mr. Tweed that the Association's Advisory Committee on Parasitic Diseases be requested to consider the question of warble-fly control in this country.

THE MEDICAL CURRICULUM

The General Medical Council has appointed a committee to consider information and proposals received by the Council with respect to the revision of the curriculum and to report to the Council. The members of the committee are the President, Mr. Leathes, Dr. Stopford, Sir George Newman, Mr. Dain, Mr. Gamgee, Mr. Johnstone, and Dr. Tidy.

IN PARLIAMENT

The Milk Bill: Committee and Report Stages Concluded

In the House of Commons on June 19th, consideration was resumed, in Committee, of the Milk Bill.

On the motion that Clause 11 (contributions from Exchequer towards the expenses of the Milk Marketing Boards) should stand part of the Bill,

Mr. Elliot, Minister of Agriculture, said that it was proposed to devote six-sevenths of the money expended to the purchase of milk for school children, and one-seventh to publicity. It was hoped to reduce the price to school children from 1d. to ½d. per third of a pint.

The clause was ordered to stand part of the Bill.

The remaining clauses were ordered to stand part of the Bill and the Committee stage was concluded.

On Report, Mr. Elliot moved, concerning Clause 12 (Extension of functions of milk marketing boards), in page 15, line 12, to leave out from "and," to "or," in line 16, and to insert:

> "has been produced in circumstances determined by the Minister or by the board with the object of securing, so far as practicable, that the milk is pure and free from the infection of any disease."

In doing so, the Minister said: This is really a drafting Amendment to ensure that it will be possible for these proposals to be continued, if it can be done, by agreement, and not necessarily by an Order. Owing to a slight mistake in drafting, the Clause as it stands only makes it possible to continue these payments under the Bill if an Order has been made. We think it probable that it will be possible to continue them by arrangement, without an Order."

The Amendment was agreed to.

In regard to Clause 13 (Interpretation) Lieut.-Colonel Sir Arnold Wilson moved, in page 15, line 34, at the end, to insert:

> "'pure' means milk which has not been treated by heat in such a way as to destroy or modify its natural characteristics and to which no foreign matter such as water, skimmed milk, fat, or other substances have been added;
>
> 'free from the infection of any disease' means—
>
> (*a*) of a standard of bacteriological purity; and
>
> (*b*) of nutritional content at—
>
> (*c*) a given temperature within a—
>
> (*d*) given number of hours after production, which shall be fixed from time to time by the Minister of Agriculture and the Minister of Health after a public inquiry at the cost of the Milk Marketing Board."

Sir Arnold proceeded:

The object of the Amendment, is two-fold. In the first place, it is to exclude pasteurised milk and milk treated by heat in other ways from the financial benefit of Clause 9. It is clear that were it to be included, it would wreck the scheme, but there are other reasons, and in the second part of this Clause the object is to set up a scientific body which would give scientific study to the great question of milk in all its aspects. That is exactly what the People's League of Health advocated in its memorandum of October, 1931, to encourage further critical study of the effect of a compulsory standard of pasteurisation on the nutritional qualities of milk and its influence on the distributional aspect of the milk problem. I am reluctant to detain the Committee for any length of time on this complicated subject, but the Hopkins Report, which has been in our hands for some time, deals only incidentally with the question of pasteurisation, which was scarcely within its terms of reference. I am very much impressed on giving it careful study with the grudging support it gives to pasteurisation throughout. May I read a few extracts which have a direct bearing and which have induced me to put down this Amendment? It admits that vitamin C is undoubtedly destroyed to a greater or less degree by the process of pasteurisation and goes on to say that this deficiency, if it occurs, can be fortunately corrected by the use of orange and lemon juice, which are now so easily obtainable. But it is by no means easily obtainable. It costs anything from 6d. to 1s. per child, and in many parts of England it is, practically speaking, unable to be secured.

The Committee go on to say, while far from praising pasteurisation, that there is no evidence that it has been in any way responsible for such diseases as are known to result from vitamin deficiency. A little further on it is stated that there is no clear evidence of greater vitamin deficiency in districts where the greater part of the milk is pasteurised than in areas where it is not. Again, a most equivocal approval. It mentions that, in America, where a large number of children were fed on pasteurised milk they promptly became ricketty and the deficiency was only cured by the administration of an anti-scorbutic diet of fruit juice. I could continue to quote at length from the report.

The Chairman (Sir Dennis Herbert): I am afraid there was a point which had escaped my attention. Perhaps the hon. and gallant Gentleman will help me. I cannot find any reference to "pure milk" anywhere in the Bill. If the expression does not occur, I do not think it will be in order to propose the insertion of a definition of "pure milk."

Sir A. Wilson: The words "pure and free from the infection of any disease" occur in the additional Clause which has just been moved by the Minister.

Sir S. Cripps: The words "milk pure and free from the infection of any disease" do occur. It is "milk pure" not "pure milk."

The Chairman: The hon. and gallant Gentleman might possibly have raised the point on Clause 9 where it says that:

> "the Minister . . . may expend out of moneys provided by Parliament such sums as he thinks fit, with the object of securing so far as practicable that the milk supplied for human consumption in England or in Scotland, as the case may be, is pure and free from the infection of any disease."

It is too late to do that now and I am afraid I must rule this Amendment out of order. It is a definition of something which does not occur in the Bill at all.

Sir A. Wilson: May I leave out the word "pure" and continue to discuss the words "free from the infection of any disease"?

The Chairman: I am afraid not. The hon. and gallant Gentleman can raise that, perhaps, by an Amendment on Clause 9.

Motion made, and Question, "That the Clause stand part of the Bill," put, and agreed to.

The Report stage was concluded on June 25th.

The following questions and answers were recorded in the House of Commons recently:—

Warble-Fly Pest

Mr. Burnett asked the Minister of Agriculture whether he proposes to take any steps to deal with the warble-fly pest among cattle?

The Minister of Agriculture (Mr. Elliot): During the warble seasons 1930-1932, demonstrations in the treatment of infested cattle were organised in many counties in England and Wales by the local authorities and a committee of the Leathersellers' Company, whose expenditure for this purpose was partly met by a grant from the Empire Marketing Board. Similar demonstrations were carried out in Scotland. The efficacy of treatment was adequately shown. An advisory leaflet explaining the life history of the parasite and methods of control is published by the Ministry, and I am in consultation with the National Farmers' Unions of England and Scotland, and with the County Councils' Association, as to the practicability of applying general measures against the pest.

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Poultry Industry

Sir Thomas Rosbotham asked the Minister of Agriculture if he has considered the Resolutions, copies of which were sent to him, passed by a meeting of 2,000 poultry keepers in Lancashire, calling attention to the serious position of those engaged in that branch of agriculture; and what action he proposes to take to avert a disaster to the poultry industry?

Mr. Elliot: I have examined carefully the Resolutions referred to by my hon. Friend. As regards the quantitative regulation of imports of eggs in shell, I would refer to the reply I gave to the hon. Member for Horncastle (Mr. Haslam) on June 4th, a copy of which I am sending to my hon. Friend, dealing with the emergency steps which the Government has taken to hold the import situation for the time being. As regards the suggested increased Customs duties, I would remind my hon. Friend that the statutory procedure provides for consideration of these matters in the first instance by the Import Duties Advisory Committee. The Resolutions generally will receive my careful consideration, but my hon. Friend will be aware that the whole question of the future organisation of the egg and poultry industry in England and Wales is at present being considered by a Reorganisation Commission, and that a similar inquiry is in progress in Scotland. In the meantime, as I have indicated, action with regard to imports of eggs in shell has already been taken.

Mr. Lambert: Has the attention of the Import Duties Advisory Committee been directed to this matter?

Mr. Elliot: I could not answer that question without notice.

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Tuberculosis Order, 1925

Mr. Rhys Davies (for Mr. T. Williams) asked the Minister of Agriculture how many qualified veterinary surgeons are employed by his Department exclusively for inspecting cattle, and farm sheds and buildings, and other duties involved in the Tuberculosis Order, 1925; and how many inspections were carried out during the last year for which figures are available?

Mr. Elliot: There are no qualified veterinary surgeons employed by the Ministry exclusively on duties involved under the Tuberculosis Order, 1925, which, in the main, is administered by the local authorities and their veterinary staffs. Imported cattle are examined in the landing places by the Ministry's veterinary staff for tuberculosis as well as for other scheduled contagious diseases, and on this work 11 veterinary inspectors are employed full time.

Mr. Davies: May I ask the right hon. Gentleman whether he is aware of the present number of persons employed upon those inspections, and, if he is not satisfied, will he be good enough to look into the matter?

Mr. Elliot: As my hon. Friend knows, we have proposals before Parliament for the improvement of the dairy herds.

. . . . .

Cruelty to Animals (Prosecutions)

Lieut.-Colonel Moore asked the Home Secretary the number of convictions in respect of charges of cruelty to animals during 1931, 1932 and 1933, respectively?

Sir J. Gilmour: The number of persons found guilty in England and Wales of cruelty to animals in the last three years for which figures are available was 3,055 in 1930, 2,741 in 1931 and 2,744 in 1932. Figures for 1933 are not yet available.

. . . . .

Diseases of Fish (Furunculosis)

Captain Cunningham-Reid asked the Minister of Agriculture whether his attention has been drawn to the claim of Mr. Edward R. Hewitt to have found a cure for furunculosis; and whether he will consider referring this claim to the Furunculosis Committee for immediate examination or otherwise investigating it so as to give him an authoritative report while the Diseases of Fish Bill is still before Parliament?

Captain Sir George Bowyer: I have been asked to reply. The answer to the first part of the question is in the affirmative. The Furunculosis Committee has been consulted on the subject, and as soon as their considered reply has been received my right hon. Friend will communicate with my hon. and gallant Friend. It is, however, improbable that the results of any experiments would be available this summer.

IMPORTATION OF MEAT: AMENDING REGULATIONS

The Minister of Health has caused draft Regulations to be prepared to amend the Public Health (Imported Food) Regulations, 1925 and 1933.

The principal purpose of the proposed new Regulations is to extend the existing scheme of Official Certificates so as to require that all imported meat (*i.e.*, the flesh or other edible part of cattle, sheep, swine or goats, and including meat which has been cooked, cured or otherwise treated) and meat products (including any article of food, other than margarine, of which meat or animal fat is an ingredient) must be accompanied by an Official Certificate of the country of origin which has been formally recognised by the Minister for that purpose.

Copies of the draft Regulations, entitled "Draft dated June 15th, 1934, of the Public Health (Imported Food) Amendment Regulations, 1934, proposed to be made by the Minister of Health," may be purchased directly, or through any bookseller, from His Majesty's Stationery Office, Adastral House, Kingsway, W.C.2, and any representations with regard to them should be sent to the Secretary of the Ministry within a period of 40 days from that date.

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

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DIARY OF EVENTS

July 2nd.—Membership Examination Fees due.
July 2nd.—N.V.M.A. Committee Meetings.
July 3rd.—N.V.M.A. Committee and **Council** Meetings.
July 4th.—Meeting of the Derbyshire Division, N.V.M.A., at Derby.
July 4th.—R.C.V.S. Committee Meetings.
July 5th.—R.C.V.S. Committee Meetings.
July 6th.—R.C.V.S. Committee and **Council** Meetings.
July 9th.—Meeting of the Editorial Committee, N.V.M.A., at 2, Verulam Buildings, Gray's Inn, W.C.1, at 4.30 p.m.
July 9th.—R.C.V.S. Membership Written Examination.
July 11th.—R.C.V.S. Membership Oral Examinations begin.
July 19th.—Annual General Meeting of the Veterinary Practitioners' League, at Birmingham.
July 20th.—Summer Meeting of the Royal Counties Division, N.V.M.A., at Staines.
July 20th.—Summer Meeting of the Mid-West and South Wales Division, N.V.M.A., at Cheddar.
July 30th-Aug. 3rd, 1934.—National Veterinary Medical Association Congress, Edinburgh.
Aug. 13th-18th, 1934.—Twelfth International Veterinary Congress, New York.
Aug. 24th.—Entries due for Jubilee Memorial Bursary Examination.
Sept. 24th-25th.—Examination for award of Jubilee Memorial Bursary.

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N.V.M.A. CONGRESS NOTES

At the invitation of Dr. Bradley there will be an informal At Home in the Royal (Dick) Veterinary College on the evening of Sunday, July 29th, 1934. It is hoped that members who are in Edinburgh over the week-end will take advantage of this opportunity of meeting prior to the Congress. Members will be welcome at any time during the evening between the hours of 8 and 11 p.m.

Ladies' Veterinary Benevolent Guild

The Annual General Meeting of the Ladies' Veterinary Benevolent Guild will take place at the Royal (Dick) Veterinary College, on Wednesday, August 1st, at 12 noon.

All ladies, whether members of the Guild or not, who may be interested in its work, are cordially invited to attend.

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OBITUARY

Hans, Robert, Boyle, Co. Roscommon, I.F.S. Graduated Dublin, December 15th, 1914; died June, 1934.

Peele, Harry, Springfield, Durham, (Chief Veterinary Officer, Durham C.C.). Graduated London, November 13th, 1894; died June 18th, 1934, aged 61 years.

Pierse, John Hodgins, Patrick Street, Listowel, Co. Kerry, I.F.S. Graduated Edinburgh, December 19th, 1893; died June 13th, 1934.

The late Major Harry Peele

The North of England Veterinary Medical Association has lost an old and honoured member by the death of Major H. Peele, Chief Veterinary Officer for the County of Durham.

Major Peele was president of the division in 1927-28, and served as Chairman of the Provisional Committee for the Newcastle-on-Tyne Congress of the N.V.M.A. He was also a member of Council for some years.

Major Peele, who was 61, was a member of a family which had rendered notable service to Durham for generations. He was the youngest son of the late Mr. J. E. Peele, F.R.C.V.S., J.P., of Durham, and a nephew of the late Alderman Richardson Peele, who was Mayor of the city in 1890.

Major Peele succeeded his father in practice in the city, and on the formation of a whole-time veterinary service in Durham he was appointed Chief Veterinary Officer.

He had a long and distinguished military career, and on his return home from France, where he served during the War as a major in the Royal Army Veterinary Corps, he received the important appointment of Deputy Assistant Director of Veterinary Services in the Northern Command. He retired from that position four or five years ago.

Major Peele was one of the best-known figures in northern rowing meetings. While at Durham School he stroked a crew, later on joining the Town Club. He was a member of the senior crew which won the Wharton and Grand Challenge Cups at Durham Regatta. When his active rowing days ended he became an appreciated regatta official.

A large and representative gathering attended the funeral at Durham on June 20th. The North of England Veterinary Medical Association was represented by the President and Hon. Secretary, Messrs. A. C. Forbes and J. R. Rider, and among those present were Messrs. W. J. Young, C. G. Hill, T. M. Mitchell, J. J. McDowall, J. W. Ridler, L. E. Perkins, H. B. Allan, E. R. Callender, H. P. Lightfoot, T. Wilkinson and G. Oliver.

The sincere sympathy of their many friends in the profession will be extended to the widow, three sons and two daughters. The sons and a nephew acted as under-bearers at the interment.

The Durham practice is being carried on by the eldest son, Mr. J. D. Peele.

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PERSONAL

Mr. L. P. A. Grace Succeeds Colonel Young

We understand that, subject to the approval of the Court of Common Council and the Ministry of Health, Mr. L. P. A. Grace, M.R.C.V.S., D.V.S.M., Chief Veterinary Officer, Cardiff, has been selected to fill the appointment of Chief Meat Inspector of the Corporation of the City of London, rendered vacant by the retirement of Lieut.-Colonel T. Dunlop Young.

The late Mr. Francis Ridler's Gifts to Charities

Mr. Francis Ridler, Palace Gardens Terrace, Kensington, veterinary surgeon, left £126,287 (net personalty £126,060). Bequests included a reversion of £20,000 to the Royal Blind School, Leatherhead. They comprised:

£5,000 to Florence Celin, for life, with remainder to the Royal Blind School for Indigent Blind, Leatherhead; £5,000, upon trust, for Rose Bendle, for life, with similar remainder; £5,000, upon trust, for Lily Bendle, for life, with similar remainder; £5,000, upon trust, for Florence Ridler, for life, with similar remainder.

£2,000 to the Cancer Hospital, Brompton.

£1,000 each to the Hospital for Consumption, Fulham; the West London Hospital, Hammersmith-road; St. Dunstan's Home for Blinded Soldiers and Sailors; the Wesleyan Methodist Foreign Missionary Society; the Royal Blind School for Indigent Blind; St. George's Hospital; the National Children's Home and Orphanage.

£500 to the Wesleyan Methodist Chapel, Denbigh Road, Notting Hill.

* * * * *

Illness of Mr. Thomas Wilson.—We regret to learn that Mr. Thomas Wilson, M.R.C.V.S., of Nantwich, immediate Past-President of the Lancashire Division, N.V.M.A., and member of Council, N.V.M.A., is lying in a Newcastle-under-Lyme nursing home following the performance of an operation. A reassuring message, however, has been received from Mrs. Wilson, who informs us that Mr. Wilson is progressing satisfactorily and that there is every prospect that in a few weeks he will be fully restored to health.

* * * * *

REGISTER OF DAIRY CATTLE

Volume XVII of the Register of Dairy Cattle has just been published. It contains particulars of 680 cows in respect of which Certificates of Merit have been awarded by the Ministry since October 1st, 1933. This compares with 553 cows entered in the previous Volume. To be eligible for a Certificate of Merit, a cow must have given, during a period of three consecutive Milk Recording Years, not less than the prescribed yield of milk, and must normally have calved not less than three times during those years. The prescribed yields for the three-year periods are 30,000 lb. for Friesians; 27,000 lb. for Ayrshires, Blue Albions, Lincoln Red Shorthorns, Red Polls and Shorthorns; 24,000 lb. for all other breeds or types except Dexters; and 21,000 lb. for Dexters.

A statement is given showing the number and distribution of the yields of the cows of the various breeds entered in the Register, and the highest yield certified for each breed for the three years ended October 1st, 1933. Of these cows, 12 gave over 50,000 lb. of milk during the three years concerned; 65 over 40,000 and under 50,000 lb.; 107 over 35,000 and under 40,000 lb.; 204 between 30,000 and 35,000 lb.; 190 between 27,000 and 30,000 lb.; 60 between 24,000 and 27,000 lb.; and 3 between 21,000 and 24,000 lb.

Particulars are also given of pedigree bulls of proved milking strain. The condition of entry of a bull in the Register is that its dam and sire's dam have given the standard yield prescribed for their breed or type in any particular Milk Recording Year. Entries relating to 12 bulls are given in the Volume.

A list of the Milk Recording Societies of England and Wales, with particulars of each Society and the name and address of its Secretary, is included in the Register.

The Register is priced 1s. net, and can be obtained from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, or through any bookseller. A copy of the Volume is issued free to all members of Milk Recording Societies.

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EXPORT OF BREEDING STOCK

We give below the number and declared value of animals, living, for breeding, exported from Great Britain and Northern Ireland during the three months ended March, 1934, compared with the corresponding period of 1933. (From returns supplied by H.M. Customs and Excise.)

	Jan. to March, 1934		Jan. to March, 1933	
	Number	Declared Value	Number	Declared Value
Cattle—		£		£
Argentina	49	8,130	0	0
Brazil	5	671	0	0
Uruguay	10	960	0	0
Australia	31	5,516	16	1,547
Canada	7	275	4	400
Irish Free State ...	43	1,265	89	2,219
Kenya	8	400	6	236
New Zealand ...	1	135	0	0
South Rhodesia ...	2	315	0	0
Union of South Africa	7	479	3	485
Other countries ...	2	132	3	301
Total ...	165	18,278	121	5,188
Sheep and Lambs				
Argentina	37	755	0	0
Belgium	4	34	6	48
Brazil	15	550	36	900
France	2	32	4	50
Peru	20	420	0	0
Uruguay ...	14	350	0	0
Australia	2	70	1	60
Canada	14	60	16	480
Kenya	0	0	3	189
Union of South Africa	22	213	10	45
Other countries ...	0	0	0	0
Total ...	130	2,484	76	1,772
Swine—				
Belgium	4	59	1	15
France	4	38	4	57
Italy	3	55	0	0
Japan	0	0	6	289
Poland	0	0	7	105
Spain	12	147	0	0
Yugoslavia ...	2	25	0	0
Australia	2	85	3	63
Irish Free State ...	2	12	0	0
Malta and Gozo	10	175	0	0
Other countries ...	1	16	4	50
Total ...	40	612	25	579

INTERNATIONAL HORSE SHOW BALL

Royal Veterinary College Fund

The Duke of Gloucester, attended by Captain Howard Kerr, was present at the International Horse Show Ball, which was held at Olympia, London, in aid of the Royal Veterinary College, on the evening of Wednesday, June 20th. This brilliant function was held in the great Addison Restaurant just off the arena, and in between the rehearsal and the dances guests were able to wander about the beautifully-decorated stable enclosure, viewing the veteran war horses (whose parade formed one of the programme items) and the magnificent cream Arab stallions brought over by the Egyptian mounted police. Mr. Seymour Hicks organised a "surprise" cabaret for the ball, to which Mr. Nelson Keys contributed a Spanish number.

The Ball was a success in every way, and will undoubtedly prove to have been of great benefit to the College Re-building and Endowment Fund.

. . . . .

After attending the opening afternoon performance of the International Horse Show on Thursday, June 21st, the Lord Mayor and Lady Mayoress, the Sheriffs and the City Marshal were conducted to the stables by Sir Frederick Hobday, Principal and Dean of the Royal Veterinary College.

The party displayed particular interest in the war veteran chargers. These ranged in age from 25 to 30 years, and most of them have been wounded in the service of their country. Outside Peter's box—Peter being a veteran of 27 and owned by Mr. G. A. Tomlin, M.R.C.V.S., of Woodbridge, Suffolk—was a giant nosebag, 5 ft. by 4 ft. 6 ins., which the Lord Mayor "christened" by placing in one of the many slots a thousand farthings. This appropriate receptacle (illustrated below), is to be used for collecting purposes for the Royal Veterinary College at horse shows throughout the country.

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ARMY VETERINARY SERVICE

Promotion Examination Results

Majors Townsend, C. H. S., O.B.E., M.C., Plunkett, J. J., O.B.E., and Slocock, S. L., M.C.; Lieuts. Cundell, F. L., and McLaren, I., Royal Army Veterinary Corps, were successful in the examination (in written subjects) of officers, with a view to promotion in the Regular Army, held at Home Stations last March.

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

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PART OR WHOLE-TIME?

To the Editor of The Veterinary Record

Sir,—Some remarks by Colonel Wiggin at the annual meeting of the Masters of Foxhounds Association on June 4th may well be borne in mind at the present phase of the profession's history: "Where there is a difference of opinion, there are two ways of settling it; one is to have a row, and for the loser to accept the conditions dictated by the winner. That is unthinkable under these circumstances. It would be deplorable and very unworthy if two bodies. . . . in any sense had an open quarrel. The alternative is by negotiation and discussion, or by both parties giving way a little to meet the wishes of the other."

The discussion between the protagonists of the various types of veterinary service bids fair to become a polemic, instead of, as it should and surely could be, a mutually beneficial interchange of views. It is accordingly with the utmost regret that I put pen to paper on this subject—but it is with the pious hope that no remarks of mine may exacerbate the position. My name was mentioned by Mr. Edwards in his able letter to *The Veterinary Record* some seven or eight weeks ago. A reply thereto suggested that, as one fact was incorrect, the rest might well be taken "*cum grano salis.*" In so far as Mr. Edwards' letter referred to my experience of the Birmingham Corporation Free Tuberculin Test scheme no salt is required. The facts, I regret to say, are precisely as stated in that letter.

But I am trying, earnestly trying, not to let my personal experience and loss bias my outlook on the wider questions of the trend of professional activity. The recent Report of the Economic Advisory Council's Committee on Cattle Diseases raises afresh, and in an acute form, the question of the general practitioner's position in the scheme of things. It seems almost obligatory on Local Authorities to do away, within a few years, with part-time officers. This of course will be a severe blow to many of us; it may even, as has been freely asserted, result in some districts being left with only a State Inspector to attend the calving and colic cases. But will it in the long run be prejudicial to the larger interests of the profession? I confess to a feeling of "philosophic doubt," to an almost unwilling belief in "the inevitability of gradualness." It is likely that a larger number of graduates will be required, *in toto*, than is at present in existence, if the Committee's report is carried into full effect—not, surely, a bad thing for the profession? It is so fatally easy to have our processes of ratiocination twisted by our egoism—to which a salutary turn might be given by diligent perusal of Major Dunkin's most admirable paper on "The Future of General Practice" reproduced in the *Record* of

March 24th. The profession is in a state of transition too far advanced to admit a possibility of retreat. In the process of completing this transition some of us are, I fear, bound to get hurt. It is accordingly up to both sides to see that that hurt has as little of an enduring character as possible, that the dispossessed part-time inspector receives at least fair treatment.

If I may be allowed another quotation from a speech at the Masters of Foxhounds Association meeting, "I believe a few sensible people sitting round a table could settle it in half an hour."

Yours, etc.,

Paul Crosfield.

Chipping Norton,
Oxon.
June 10th, 1934.

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DIRTY HABITS IN THE FITCH AND OTHER ANIMALS

To the Editor of The Veterinary Record

Sir,—I consider that Dr. Hare, in his excellent descriptive and illustrated article on the fur-bearing animals, has maligned the fitch by stating that it makes a larder and latrine of its bed. I have had many fitch and found them always clean in habit and, when handled, gentle. In fact, they are more docile than many ferrets, an animal which, like the fitch, makes a latrine of one of the far corners of its cage and consumes its food—raw horse-flesh, fowl, rabbit or rat—far away from its sleeping quarters or its latrine. Fitch are no more offensive than these creatures and less so than the fox, tom-cat or he-goat. I believe they are like the skunk and the dog and only eject the anal gland secretion when they are frightened, anticipate danger or are roughly handled. I know it is an ancient saying "stink like a polecat," but I think that goes back to the days before this animal was domesticated or bred in confinement.

No animal is by nature dirty in its habits. Not even the young passerine bird soils its nest before it is old enough to raise its hind quarters and evacuate the contents of its cloaca on the outer edge of the nest. The parents, like those of kittens or puppies, see to this. In the case of puppies and kittens, as soon as they have done suckling their mother licks them underneath and they then eject their fæces and urine into her mouth. When they are old enough the parents take them out for little walk and when they are some distance away from their kennel they evacuate naturally.

It is the same with all other carnivora and classes of animal. When birds are too helpless to raise themselves the parent after feeding them gives them a gentle peck on the vent and then they evacuate their droppings into her mouth and she flies away dropping the dejecta some distance from the nest and not rarely on people near.

The horse when at liberty in a meadow usually uses one corner of the field to drop his fæces. Many good coachmen have trained their stabled horses to defæcate into the basket when the back of their thigh is touched with it.

The pig is a much maligned animal. "Dirty as a pig" is often said. But, given his choice, he is as clean as any other animal.

Animals that develop dirty habits have no choice in being otherwise as they are not allowed to use their instinct.

I have encountered many cases in which the dog and cat have been trained to use the W.C. or even the chamber. Children of savages or uncivilised people never use the napkin. That is an article of apparel of civilisation.

Yours faithfully,

Henry Gray.

Kensington,
June 17th, 1934.

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AVIAN TUBERCULOSIS

To the Editor of The Veterinary Record

Sir,—I am rather surprised that at the Derbyshire meeting of the N.V.M.A. any doubt should have been expressed as to the spread of tuberculosis from fowls to pigs. As far back as 1924 Eastwood and Griffith in a Report to the Local Government Board, New Series, No. 91, London, stated that in 26 out of 78 swine examined by them tuberculosis had been carried by the avian type of the bacillus. In six pigs fowl tubercle bacilli were found in the organs of pigs which showed nothing abnormal to the naked eye. Christiansen in 86 out of 118 cases of tuberculosis in swine examined, isolated the avian bacillus and in 36 holdings out of 49 he inspected he found tuberculosis widely spread among the fowls.

There is evidence to show that men, and cattle, can occasionally be infected with the avian bacillus and Gaiger and Davies in their Veterinary Pathology and Bacteriology state: "It is easy to infect pigs, calves, foals, rabbits and mice with the avian type" and also; "It seems to be established that cattle may become reactors to the tuberculin test when grazed upon land contaminated with avian infection."

The above shows the wisdom and importance of the instruction in the Milk and Dairies Order that swine or poultry should be rigorously excluded from the precincts of cowsheds, cowhouses and dairies.

G. Mayall, m.r.c.v.s.,
Bolton.

The Editor acknowledges, with thanks, the receipt of the following:—

Communications from Mr. D. J. Anthony (Brierley Hill), Captain Hugh Begg (Lanark), Dr. J. Biely (University of British Columbia), Captain E. J. Burndred (Blackburn), Lieut.-Colonel A. G. Doherty (The Curragh), Mr. V. Berwyn Jones (Guildford), Dr. R. von Ostertag (Stuttgart), and Mr. A. R. Smythe (Falmouth).

Reports of meetings of the following Divisions, N.V.M.A., from their respective Hon. Secretaries: Mid-West and South Wales, North of England, Royal Counties, South Eastern, West of Scotland, and the V.M.A. of Ireland.

Diseases of Animals Acts.

SUMMARY OF RETURNS

Period.	Anthrax.		Foot-and-Mouth Disease.		Parasitic§ Mange.		Sheep Scab.	Swine Fever.	
	Outbreaks confirmed.	Animals attacked.	Outbreaks confirmed.	Animals slaughtered as diseased or exposed to infection.	Outbreaks reported by the Local Authorities.	Animals attacked.	Outbreaks confirmed.	Outbreaks confirmed.	Swine slaughtered.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Period 16th to 31st May, 1934	17	19	—	—	2	2	7	107	76
Corresponding period in									
1933	10	10	2	189	1	1	9	121	80
1932	23	27	—	—	6	8	2	94	41
1931	17	18	—	—	3	5	5	129	51
Total 1st January to 31st May, 1934	202	213	2	92	81	128	323	690	400
Corresponding period in									
1933	153	173	56	5,350	90	163	197	665	346
1932	204	259	3	358	72	125	127	907	418
1931	248	266	5	515	77	129	169	811	333

Note.—The figures for the current year are approximate only. § Excluding outbreaks in Army Horses.

Royal (Dick) Veterinary College, Edinburgh

Principal: O. Charnock Bradley, M.D., D.Sc., M.R.C.V.S.

112th SESSION COMMENCES OCTOBER 2nd.

COURSES OF INSTRUCTION QUALIFY FOR M.R.C.V.S. and B.Sc., Edin. and for the Diploma in Veterinary State Medicine (D.V.S.M.)

College Calendar with full particulars of Examinations, Bursaries, etc., may be obtained from A. C. Doull, C.A., Secretary.

Glasgow Veterinary College

(Incorporated),

83 Buccleuch Street, Glasgow, C.3.

COURSES of instruction are given for—

The Diploma of M.R.C.V.S.

The Degree of B.Sc. in Veterinary Science (London).

The D.V.S.M.

Full particulars on application to the Principal.

Poultry Pathological Research Laboratory

Goring, Reading.

Director: H. P. Hamilton, B.V.Sc. (*Toronto*)

THE above laboratory exists solely for the investigation of Poultry Disease Problems. Every effort made to co-operate with veterinarians throughout the country. Practitioners unable to devote the time to Avian Diseases should consult this Institute.

We are now in a position to supply Avian Tuberculin to members of the profession for use in the intradermal wattle test. Prices: 10 doses for 1s. (minimum); 100 doses 8s. 6d.

Director of Research:
Position temporarily vacant.

The Laboratory, Goring, Reading

AGGLUTINATION TESTS for the presence of *Br. abortus* infection are undertaken for members of the veterinary profession at the following charges:—

Bovine Blood at 9d. per sample (minimum charge, 1s. 6d.)
Equine Blood at 3s. 6d. per sample.

ASCHHEIM-ZONDEK PREGNANCY DIAGNOSIS TEST on bovine and equine specimens undertaken.

Particulars on application to "The Director."